

# HOPE'S

HOT-DIP GALVANIZED

# STANDARD

# WINDOWS

LIST NO. 230

Revised March 1949



# *Standard* • HOPE'S W

*represent the highest interpretation of E*

## *Contents*

Standard Metal Windows for Domestic Buildings:	
without Glazing Bars	<i>page</i> 2
with Horizontal Glazing Bars	„ 3
Standard Metal Doors, Sidelights and Fanlights	„ 4
Full Size Details of Standard Doors:	
Illustrations and particulars of Door Fittings	„ 5
Full Size Details of Standard Windows	
applied to typical building conditions	„ 6
Improved Sections and Coupling Details	
for Standard Windows, and illustrations	
and particulars of Window Fittings	„ 7
Notes on Fixing, Glazing and Painting	„ 8
Fixing Materials, and Full Size Details	
of Fixing Lug and Larder Window	
Lug Positions and Fixing Hole centres	„ 9
HOPE'S Windows in Bays	<i>pages</i> 10 and 11
Glass Sizes	„ 12 „ 13
Agricultural Windows	<i>page</i> 14
Curtain Fittings	„ 15
HOPE'S 'Cavity' Sub-frames in pressed steel	
for 11" walls with 2½" cavity	<i>pages</i> 16 and 17
HOPE'S Galvanized Steel Cills	<i>page</i> 18
HOPE'S Departments and Branch Offices	„ 19

ALL PREVIOUS LISTS CANCELLED

Revised March 1949



# WINDOWS • *Galvanized*

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*British Standard Specification No. 990 : 1945*

## *Foreword*

This catalogue contains the complete post-war range of Standard Metal Windows and Doors for domestic use, as set out in B.S.S. 990 : 1945. Concentration on this limited range has enabled us to adopt stiffer sections than before (see pages 5 and 7), and improved fittings without any corresponding increase in cost.

Certain types in our pre-war range, for which the demand was small, have been dropped; they can still be made to meet customers' special requirements, but at extra cost.

## *General*

HOPE'S Standard Metal Windows and Doors are made of British rolled steel, cold straightened before fabrication. All windows and doors open outwards (except Larder Windows, types NL1, HL1 and LI), and are prepared for glazing from outside. Holes are drilled for curtain rail fittings at head of every window (see page 15).

Fittings are of bronze or aluminium and are interchangeable; all our side hung casements are now hung on a new type of Friction Cleaning Hinge which eliminates any form of stay and leaves the cill clear of obstruction.

For architect-designed houses we recommend that fittings be polished and toned at extra cost; chromium-plated fittings can also be supplied for kitchens, sculleries, bathrooms, etc., at a small extra.

HOPE'S WINDOWS ARE HOT-DIP GALVANIZED, and are despatched unpainted. After fixing, they should be allowed to weather for at least a month before painting.

HOPE'S Pressed Steel 'Cavity' Sub-frames for Standard Metal Windows, as well as external Steel Cills, are fully illustrated on pages 16-18.

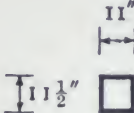


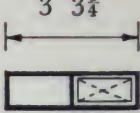
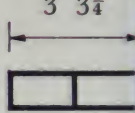
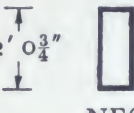





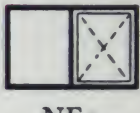















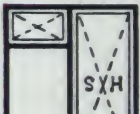

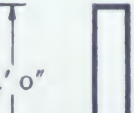




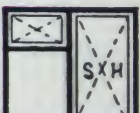








HOPE'S Pressed Steel Door Frames are illustrated in a separate catalogue, List No. 231.

HOPE'S Standard Metal Windows can now be supplied complete in Wood Surrounds.



# 2 Standard • HOPE'S W

*without Gla*

 NG6	 NG5	 NG1	 NG2	 NG8			
 NE6	 NE6F	 NE5	 NE5F	 NE1	 NES1	 NE2	 NES2
 NC6	 NC6F	 NC5	 NC5F	 NC5E	 NC1	 NC2F	 NC2
 ND6	 ND6F	 ND5	 ND5F	 ND5E	 ND1	 ND2F	 ND2
SUB-LIGHT							
 ND6/S	 ND6F/S	 ND5/S	 ND5F/S	 ND1/S	 ND2F/S	 ND2/S	
 NDV6/S	 NDV6F/S	 NDV5/S	 NDV5F/S	 NDV1/S	 NDV2F/S	 NDV2/S	

**WHEN  
ORDERING:**

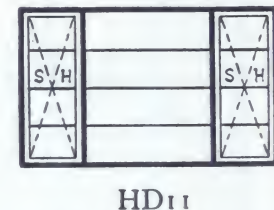
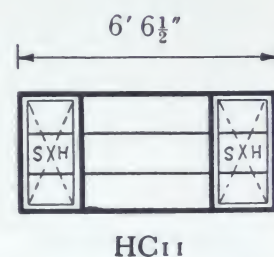
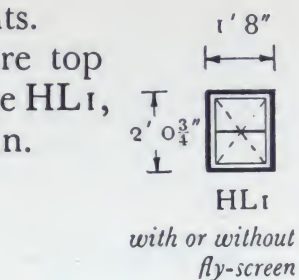
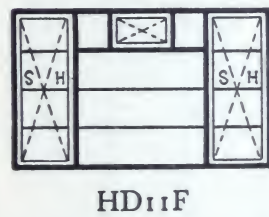
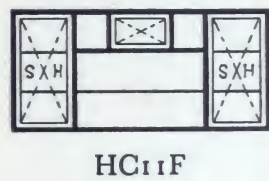
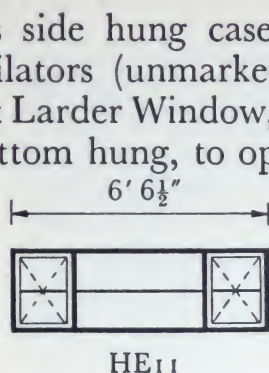
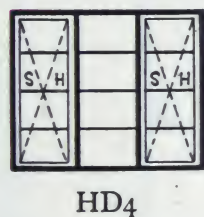
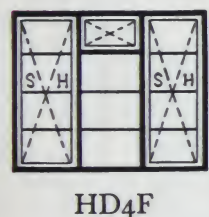
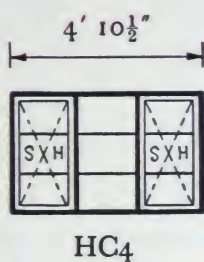
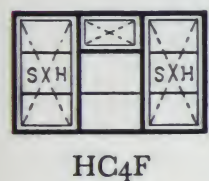
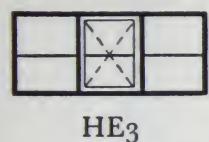
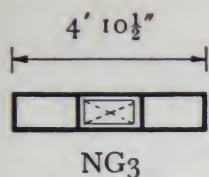
Composite units are obtained by coupling standard units. Mullions and transoms are indicated by vertical and horizontal strokes thus, as seen from inside:

State 'Hand' of Side Hung Casements and Doors.  
(The 'hand' is the hinged side looking from inside.)

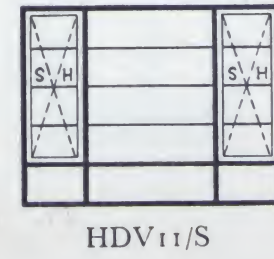
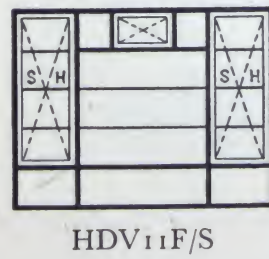
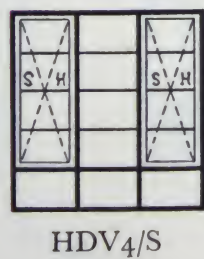
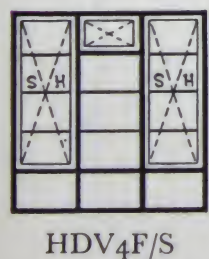
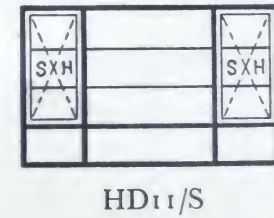
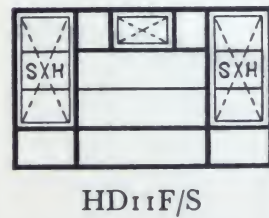
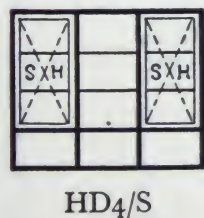
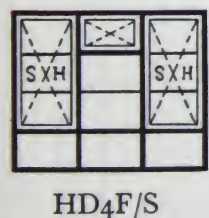
Give full consigning address.



## Glazing Bars



## HT TYPES



HE2	HE3
HD2	HD4

State Finish required for Fittings:  
*Unpolished (no extra), polished or chromium plated.*

State if weather bars are required at head.

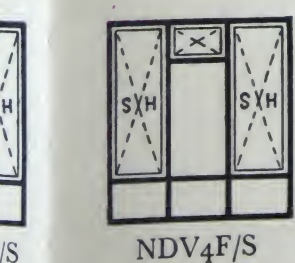
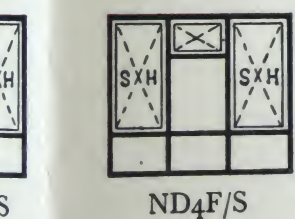
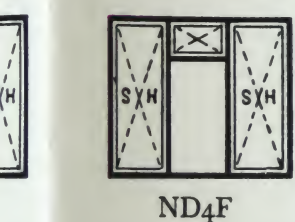
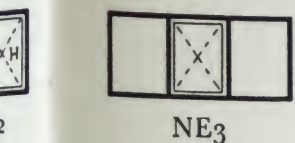
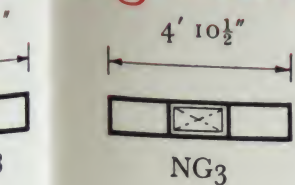
State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.

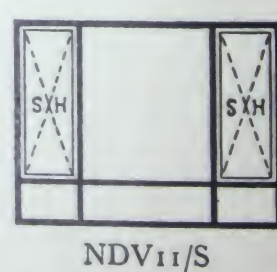
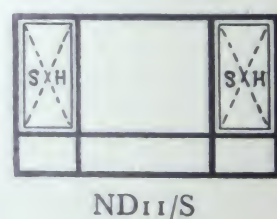
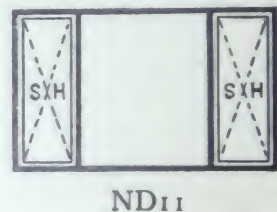
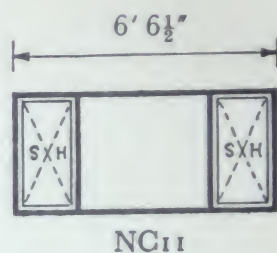
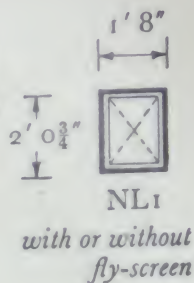
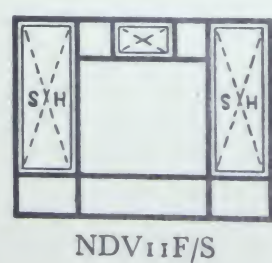
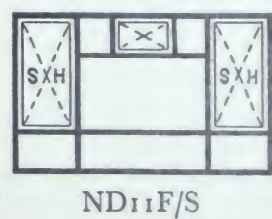
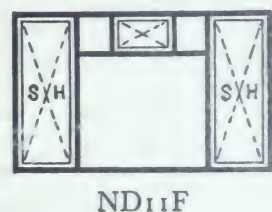
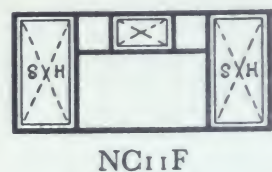
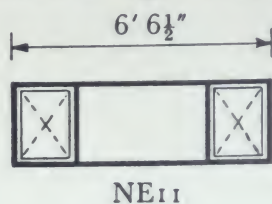


# WINDOWS • Galvanized

## azing Bars



SH denotes side hung casements.  
Other ventilators (unmarked) are top  
hung, except Larder Window, type NL1,  
which is bottom hung, to open in.



## HT TYPES

NE2	NE3
ND2	ND4

State Finish required for Fittings:  
*Unpolished (no extra), polished or chromium plated.*

State if weather bars are required at head.

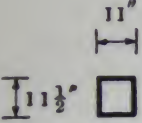


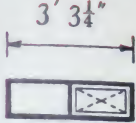

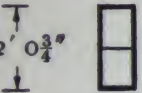







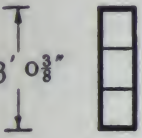







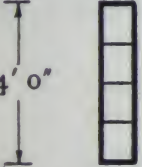





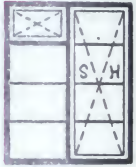

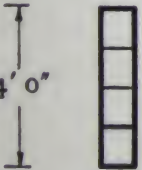




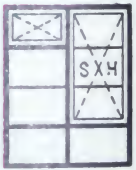

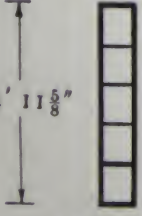




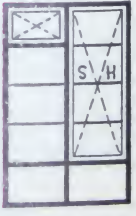

State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.



# Standard • HOPE'S WIN

*with Horizontal*

 NG6	 NG5	 NG1	 NG2	 NG8			
 HE6	 NE6F	 HE5	 NE5F	 HE1	 HES1	 HE2	 HES2
 HC6	 HC6F	 HC5	 HC5F	 HC5E	 HC1	 HC2F	 HC2
 HD6	 HD6F	 HD5	 HD5F	 HD5E	 HD1	 HD2F	 HD2
 HD6/S	 HD6F/S	 HD5/S	 HD5F/S	 HD1/S	 HD2F/S	 HD2/S	
 HDV6/S	 HDV6F/S	 HDV5/S	 HDV5F/S	 HDV1/S	 HDV2F/S	 HDV2/S	

SUB-LIGHT

## WHEN ORDERING:

Composite units are obtained by coupling standard units. Mullions and transoms are indicated by vertical and horizontal strokes thus, as seen from inside:

State 'Hand' of Side Hung Casements and Doors.  
(The 'hand' is the hinged side looking from inside.)


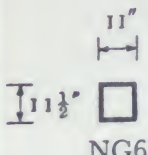


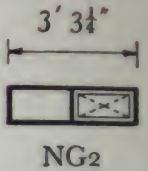
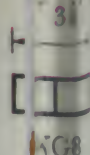
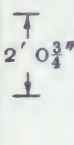






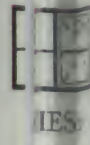

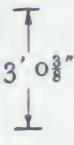








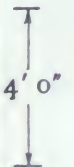





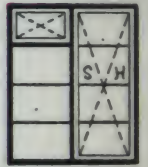

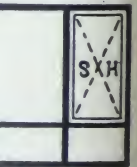
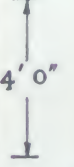
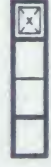



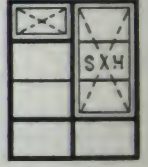


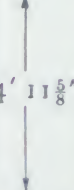




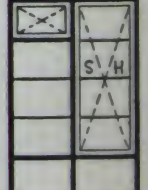
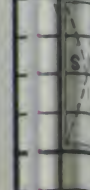
Give full consigning address.

HE2  
HD2



# Standard • HOPE'S WINDOW

*with Horizontal*

 NL1 with or without fly-screen	 NG6	 NG5	 NG1	 NG2	 NG8			
 HE6	 NE6F	 HE5	 NE5F	 HE1	 HES1	 HE2	 HES2	
 CI1	 HC6	 HC6F	 HC5	 HC5F	 HC5E	 HC1	 HC2F	 HC2
 DI1	 HD6	 HD6F	 HD5	 HD5F	 HD5E	 HD1	 HD2F	 HD2
 DI1/S	 HD6/S	 HD6F/S	 HD5/S	 HD5F/S	 HD1/S	 HD2F/S	 HD2/S	
 DI1/S	 HDV6/S	 HDV6F/S	 HDV5/S	 HDV5F/S	 HDV1/S	 HDV2F/S	 HDV2/S	

**WHEN ORDERING:**

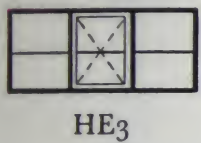
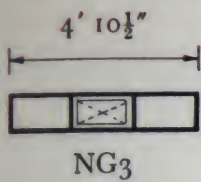
Composite units are obtained by coupling standard units. Mullions and transoms are indicated by vertical and horizontal strokes thus, as seen from inside.

State 'Hand' of Side Hung Casements and Doors. (The 'hand' is the hinged side looking from inside.)

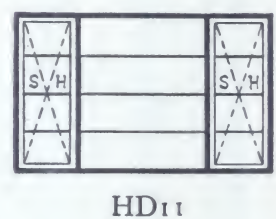
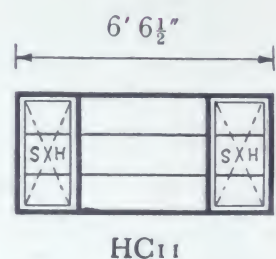
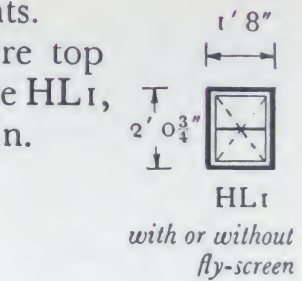
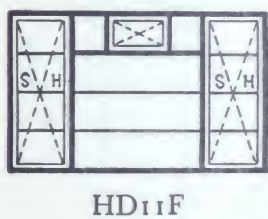
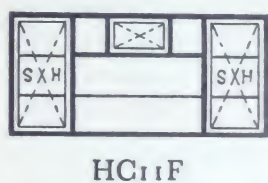
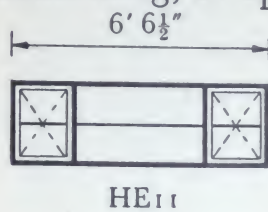
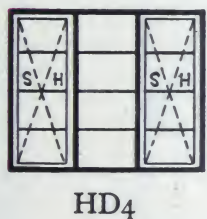
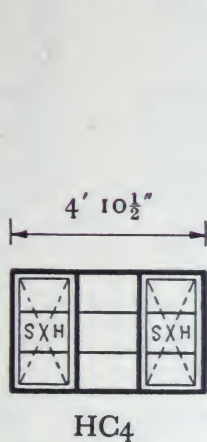
Give full consigning address.



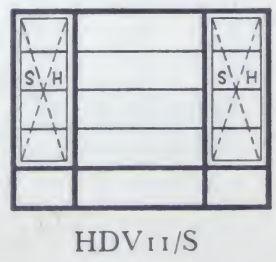
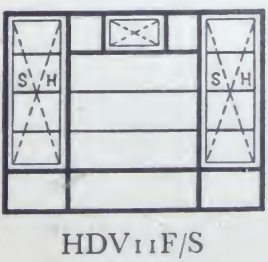
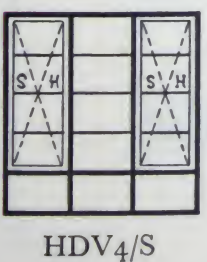
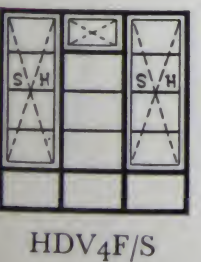
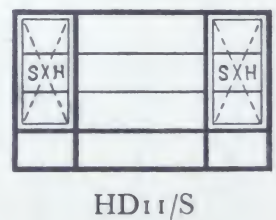
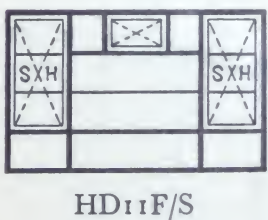
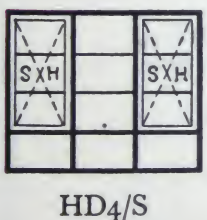
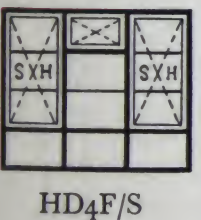
## Glazing Bars



SH denotes side hung casements.  
Other ventilators (unmarked) are top hung except Larder Window, type HL1, which is bottom hung, to open in.



## WIND TYPES



HE2	HE3
HD2	HD4

State Finish required for Fittings:  
*Unpolished (no extra), polished or chromium plated.*

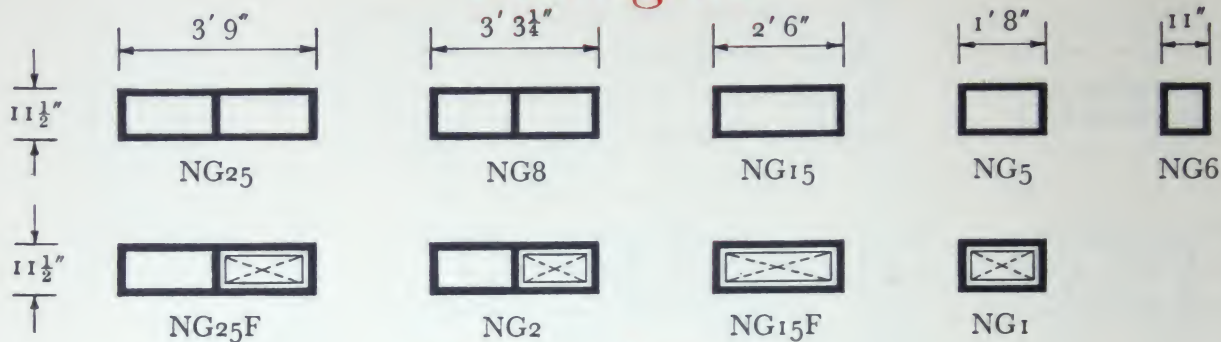
State if weather bars are required at head.

State whether fixing to Brick, Wood, or Concrete.

State whether Putty and Mastic are required.



## Fanlights

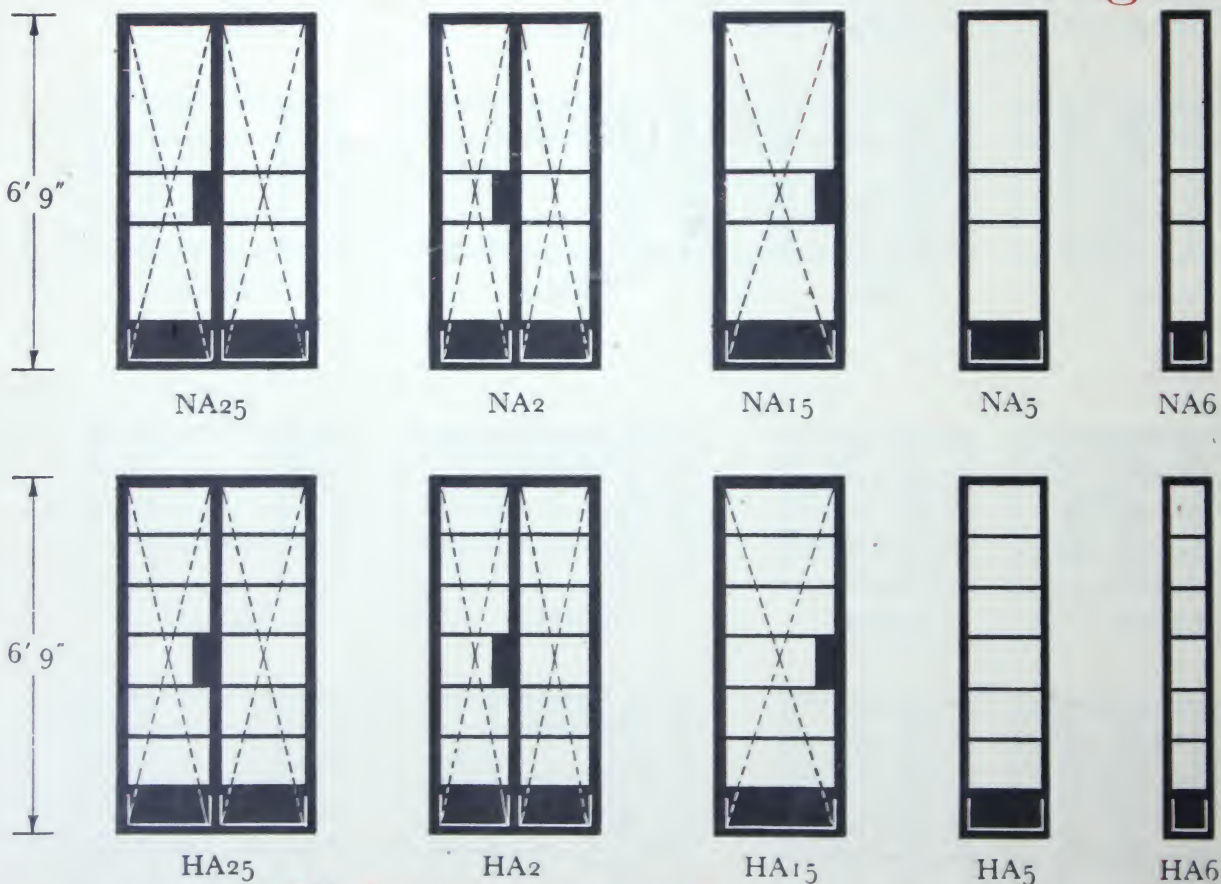


## Top Hung Ventilators

### Outside Elevations

### Doors

### Sidelights



*All doors open outwards*

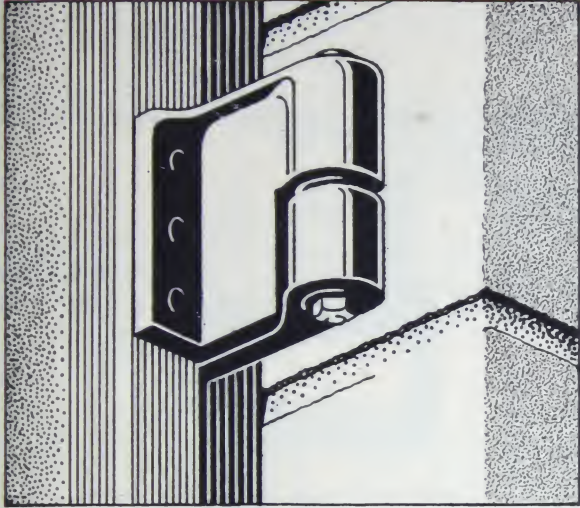
### WHEN ORDERING:

Give full  
consigning  
address

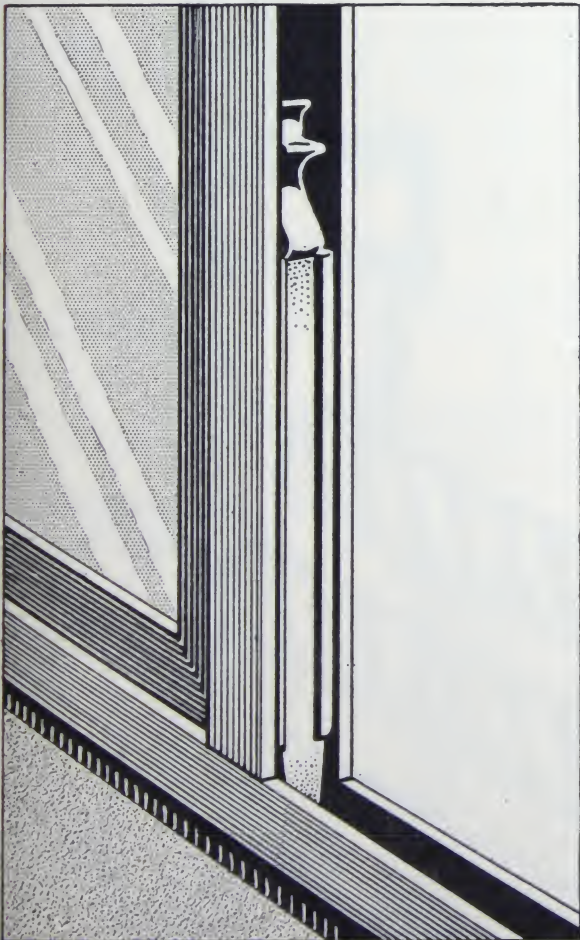
State 'hand' of single doors NA15 and HA15  
(the 'hand' is the hinged side looking from inside).  
State finish required for fittings: *unpolished (no extra), polished or chromium plated.*  
State if weather bars are required at head.  
State whether fixing to Brick, Wood or Concrete.  
State whether Putty and Mastic are required.



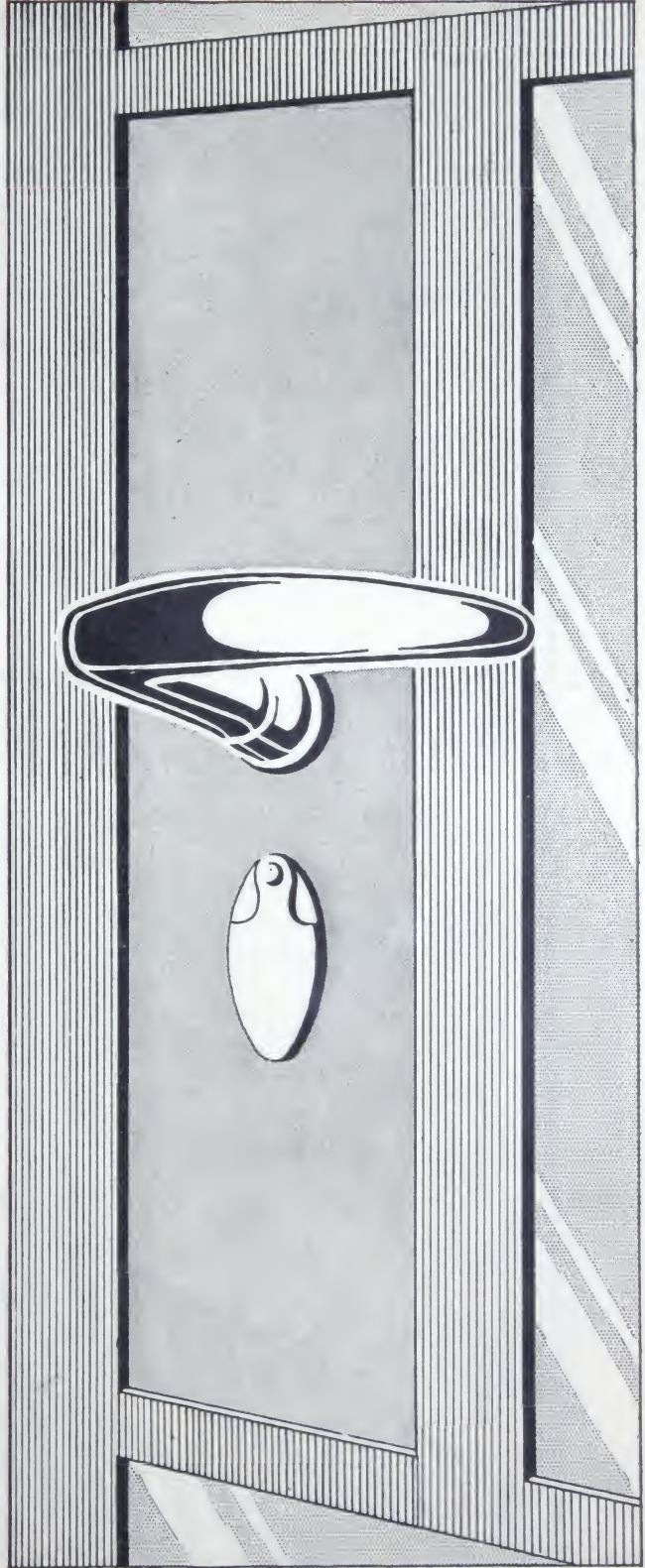
## DOOR FITTINGS *Not to Scale*



HOPE'S Projecting Hinges allow doors to be folded back against the wall.



HOPE'S Folding Doors are fitted with concealed bolts at top and bottom on the first closing leaf.

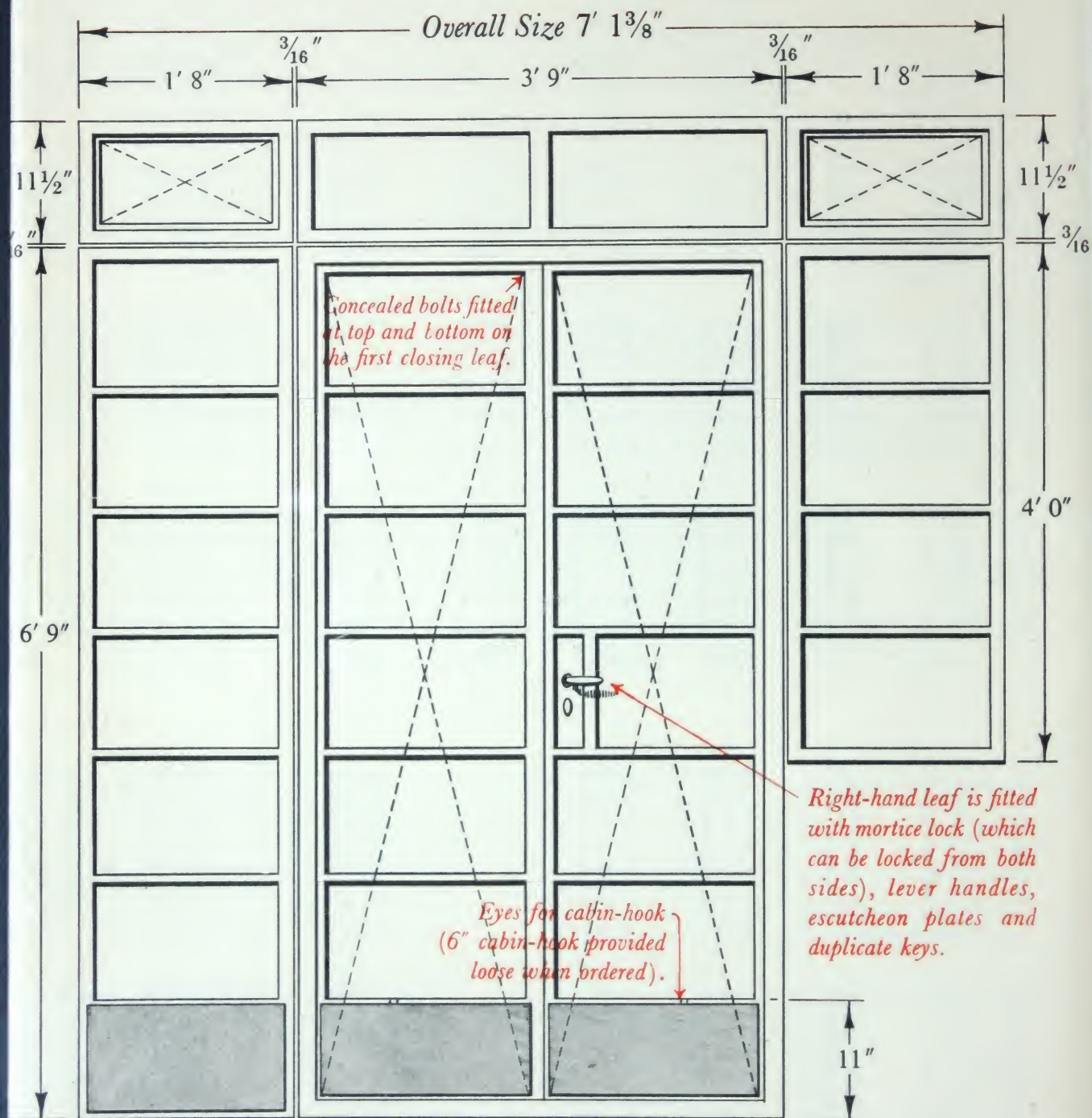


All Standard Doors are fitted with a mortice lock and lever handle and can be locked from both sides.



# WINDOWS • Galvanized

## Typical Door Composite



This composite consists of: *Fanlights:* NG1, NG25, NG1.

*Sidelights:* HA5, HD5.

*Door:* HA25.

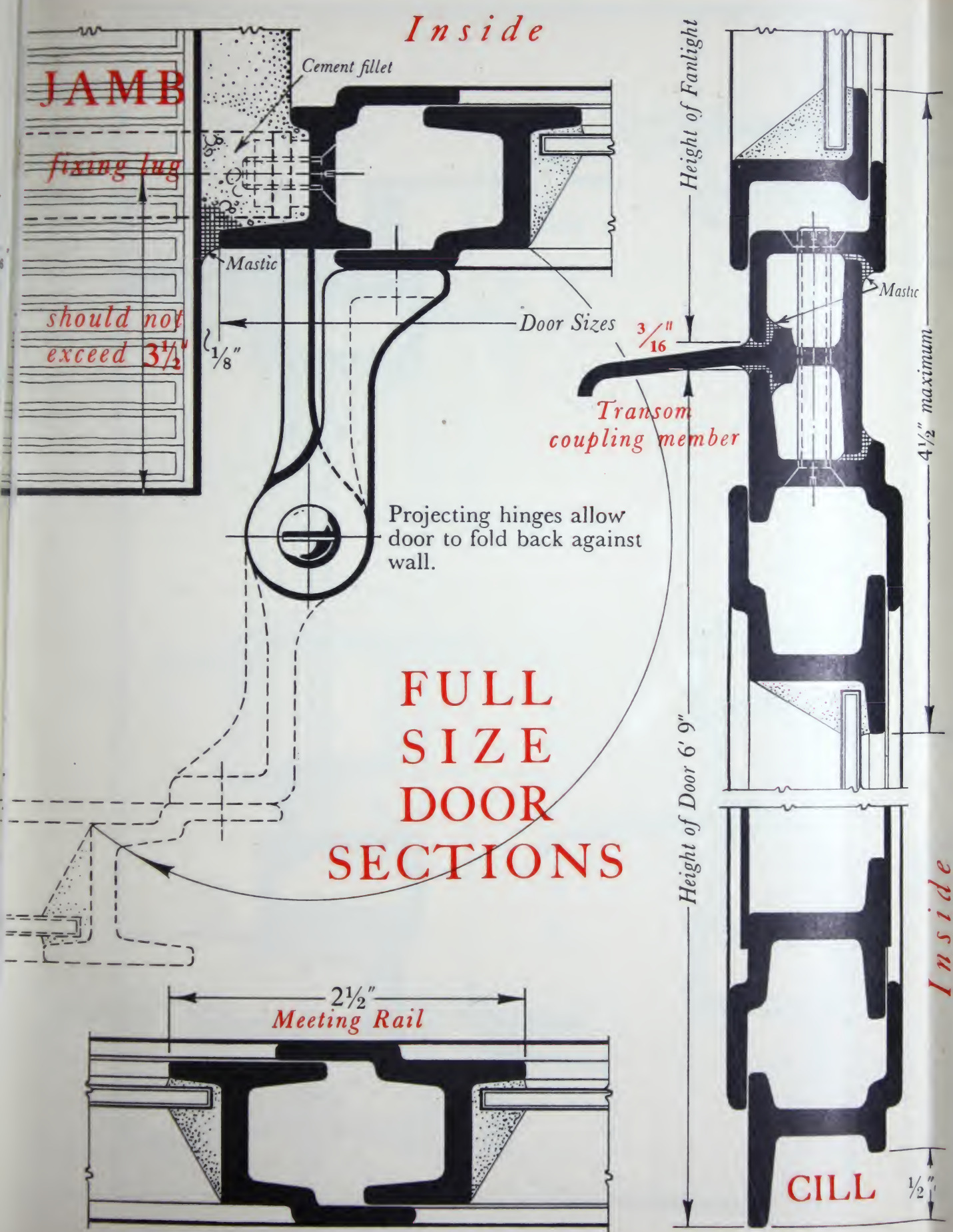
and should be ordered thus: 

NG1	NG25	NG1
HA5	HA25	HD5

 as seen from inside.



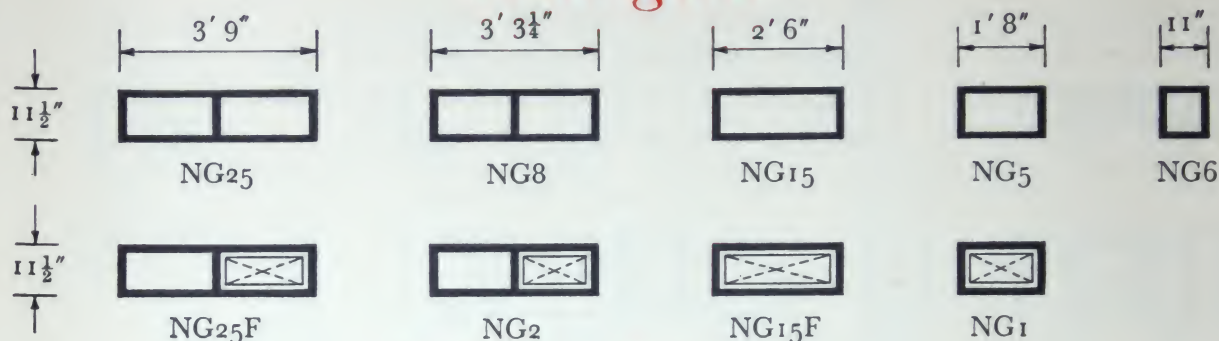
# Standard • HOPE'S WIN





# 4 Standard • HOPE'S W

## Fanlights

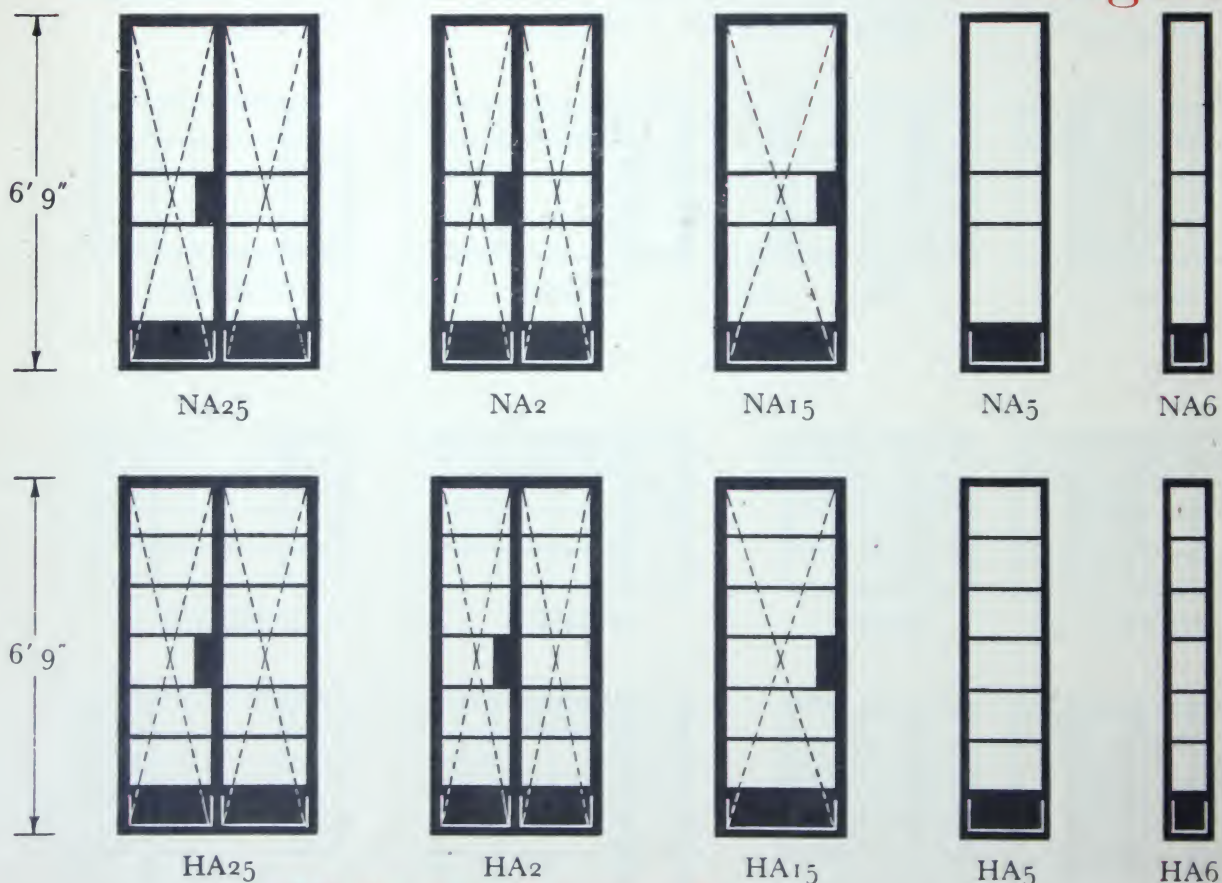


## Top Hung Ventilators

### Outside Elevations

### Doors

### Sidelights



*All doors open outwards*

### WHEN ORDERING:

Give full  
consigning  
address

State 'hand' of single doors NA15 and HA15  
(the 'hand' is the hinged side looking from inside).

State finish required for fittings: *unpolished (no extra),  
polished or chromium plated.*

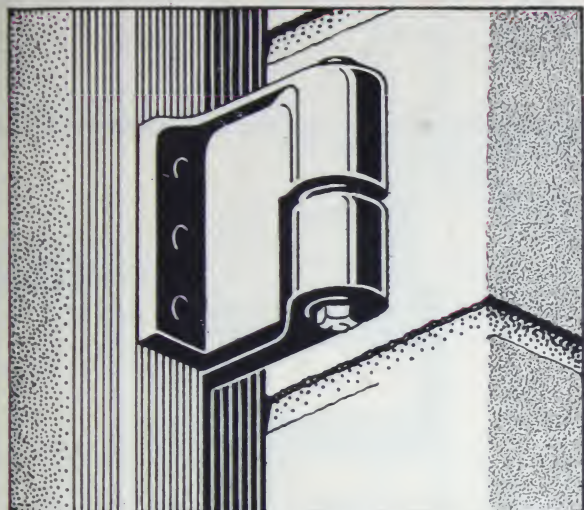
State if weather bars are required at head.

State whether fixing to Brick, Wood or Concrete.

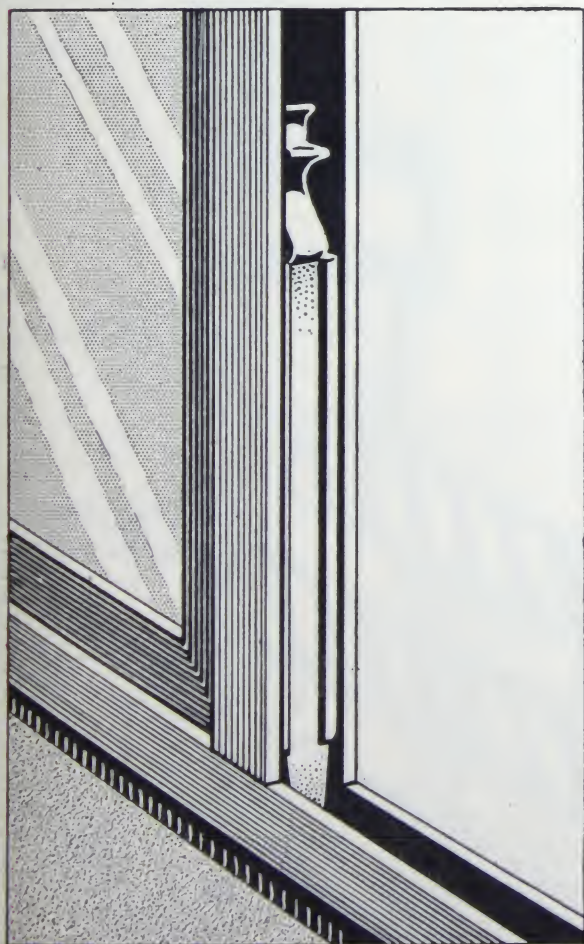
State whether Putty and Mastic are required.



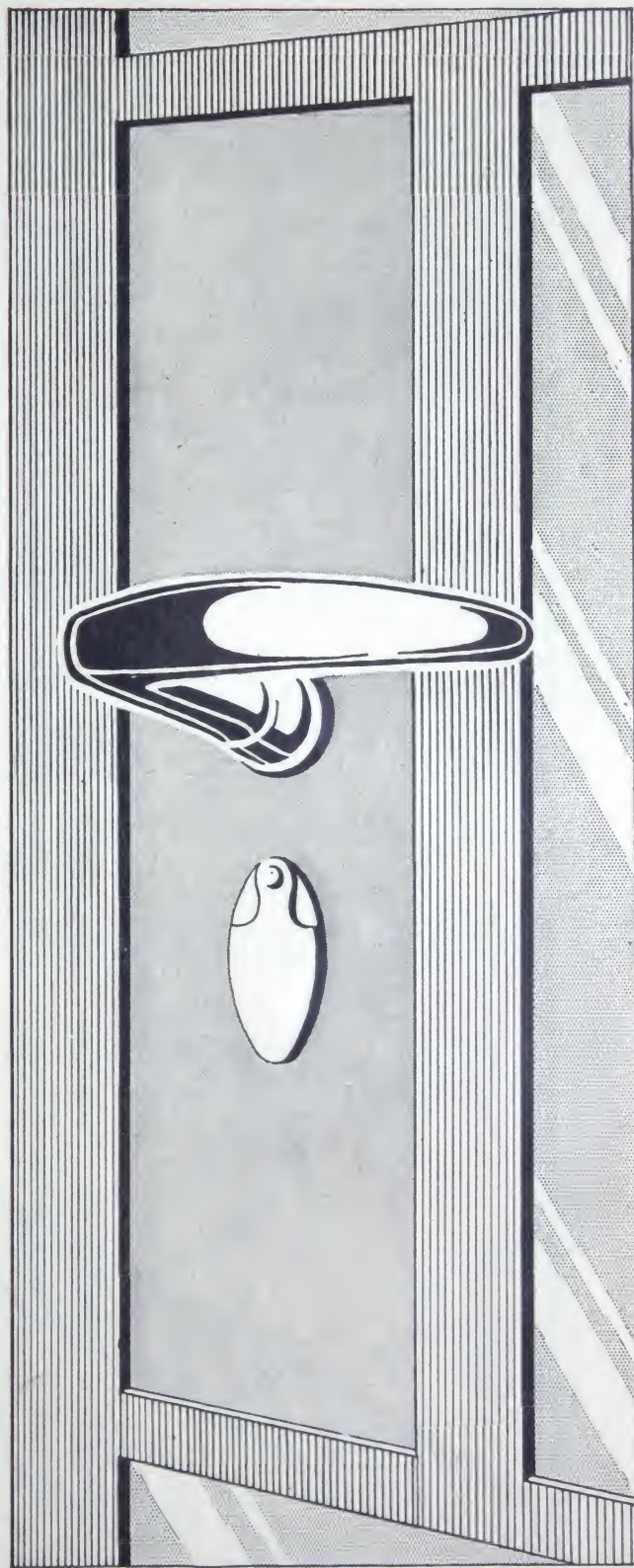
## DOOR FITTINGS *Not to Scale*



HOPE'S Projecting Hinges allow doors to be folded back against the wall.

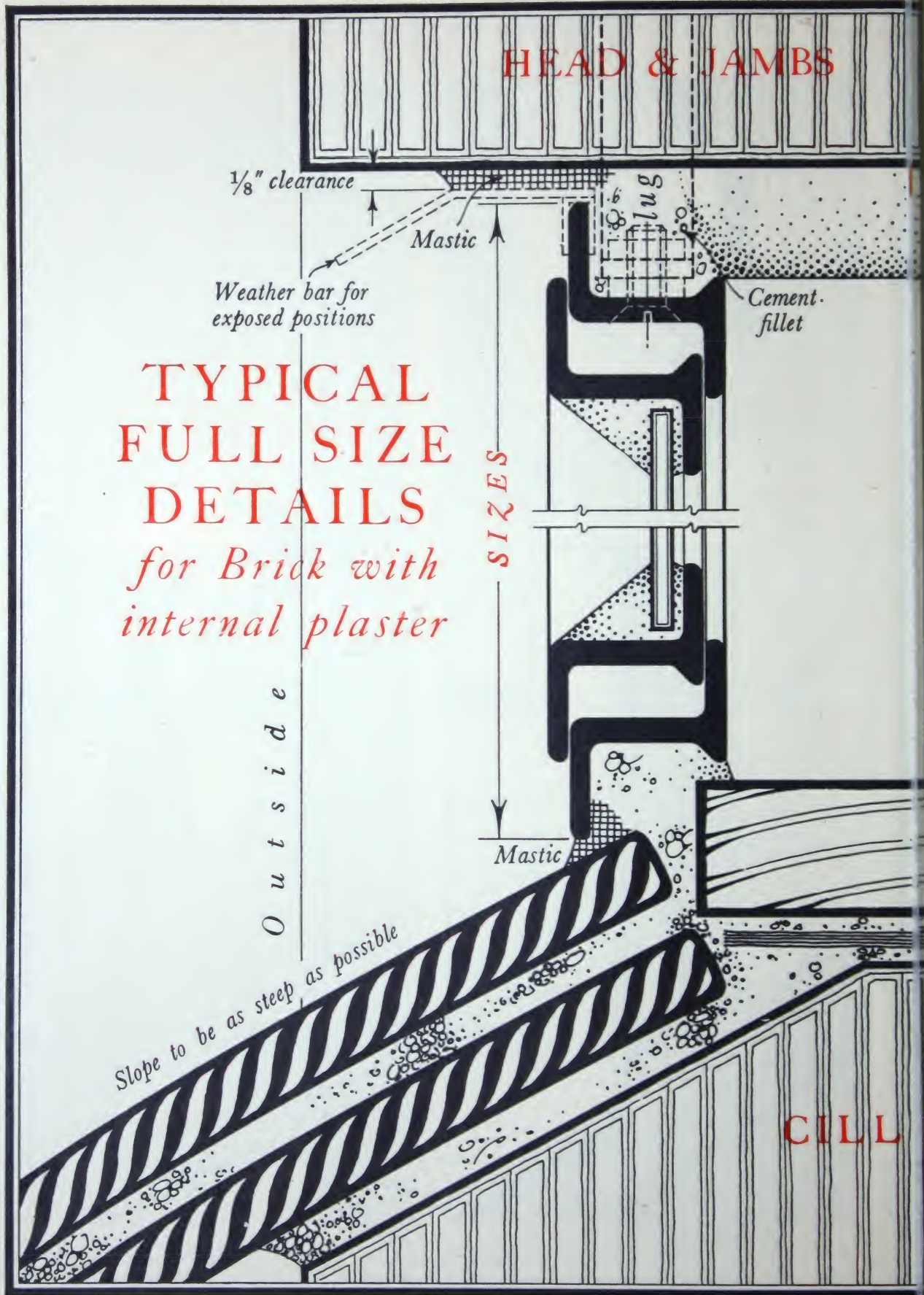


HOPE'S Folding Doors are fitted with concealed bolts at top and bottom on the first closing leaf.

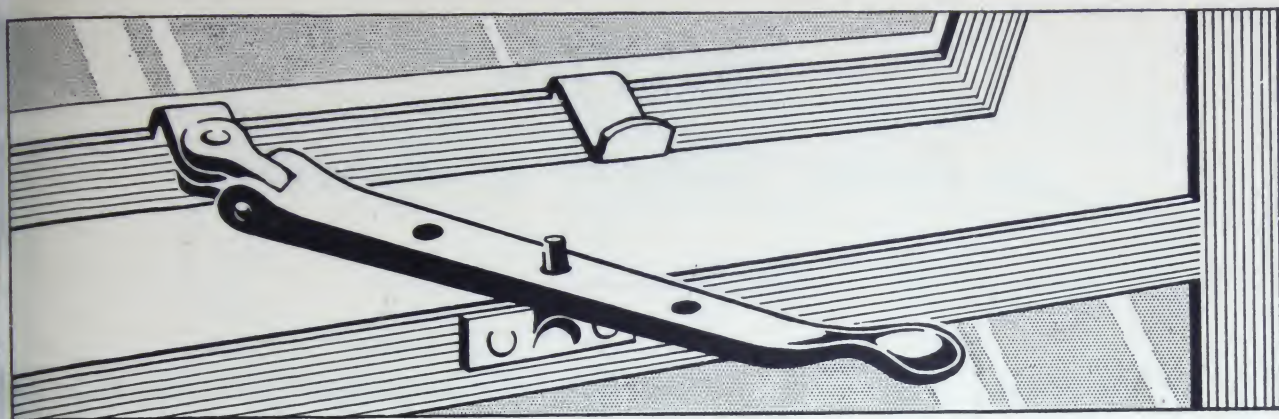


All Standard Doors are fitted with a mortice lock and lever handle and can be locked from both sides.









## WINDOW FITTINGS

Top Hung Ventilators are hung on galvanized steel hinges with sherardized pins and fitted with a bronze or aluminium peg stay.

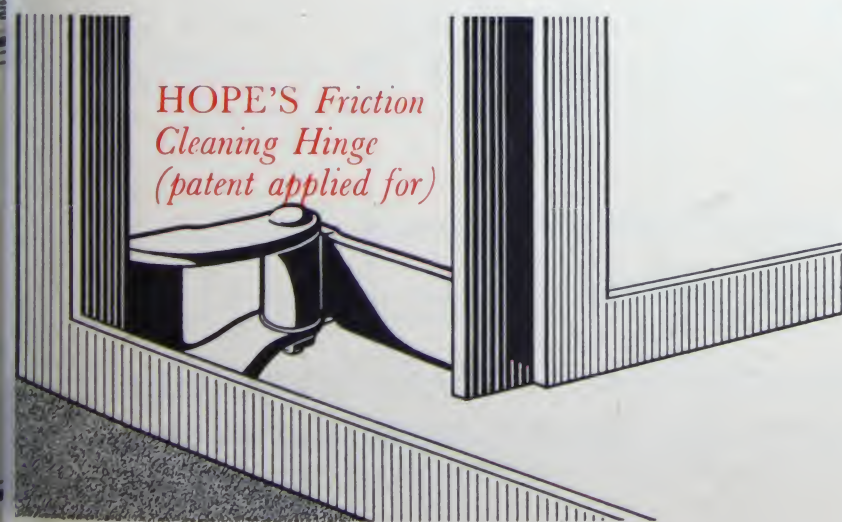
Bottom Hung Ventilators (larger windows) are fitted with spring catch and side arm which may be lifted to release ventilators for cleaning. Fly-screens are supplied on request.

Side Hung Casements are hung on galvanized FRICTION CLEANING HINGES which hold the casement firmly in any position without the need for any form of stay and also allow ample room for cleaning the glass from inside.

HOPE'S Non-projecting Sliding Stay can still be fitted to side hung casements at a small extra cost, if ordered specially.

HOPE'S 2-point handle with patent friction mounting holds the casement open one inch for a little ventilation, works smoothly and does not drop when open.

FINISH: Handles and stays, unless otherwise ordered, are supplied unpolished. Polished or chromium-plated fittings supplied on request at small extra cost.



*HOPE'S Friction  
Cleaning Hinge  
(patent applied for)*

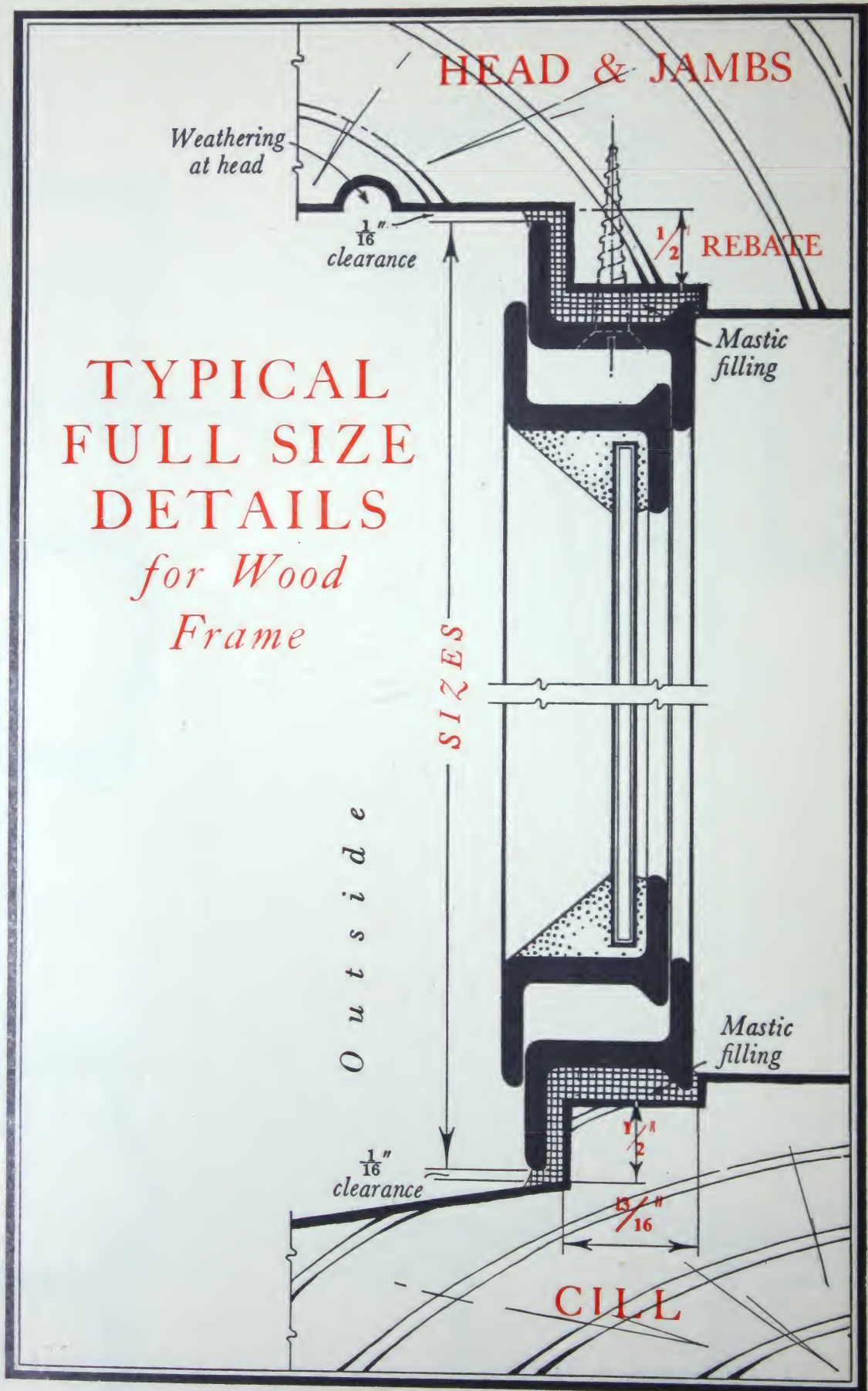
*Patent No.  
563580*



*HOPE'S  
2-point Handle*



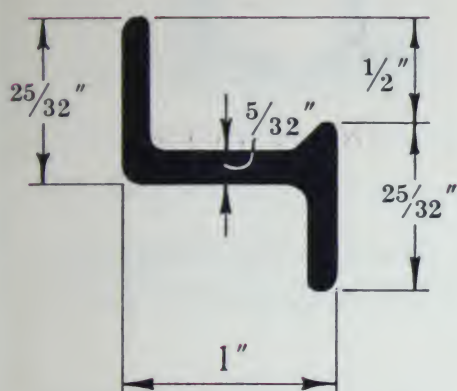
# WINDOWS • Galvanized





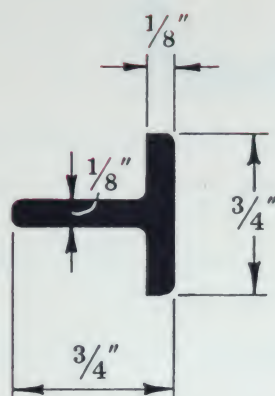
## IMPROVED SECTIONS and Coupling Details

FULL SIZE



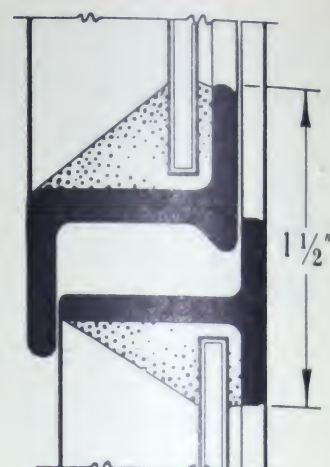
OUTSIDE FRAME BARS  
and VENTILATORS

Weight: 1.03 lb. per ft.

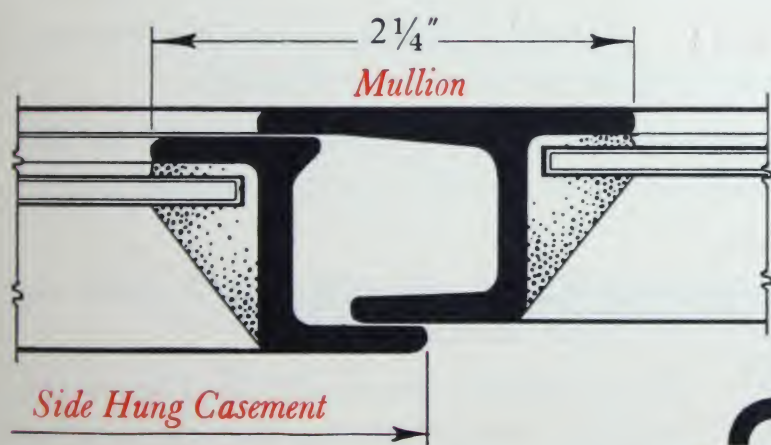


GLAZING BAR

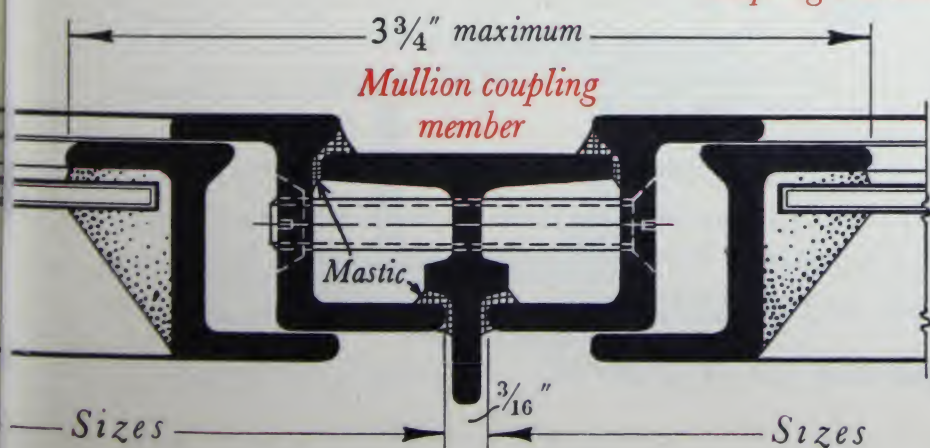
Weight: 0.59 lb. per ft.



Section through lower  
Rail of Top Hung  
in 'F' types

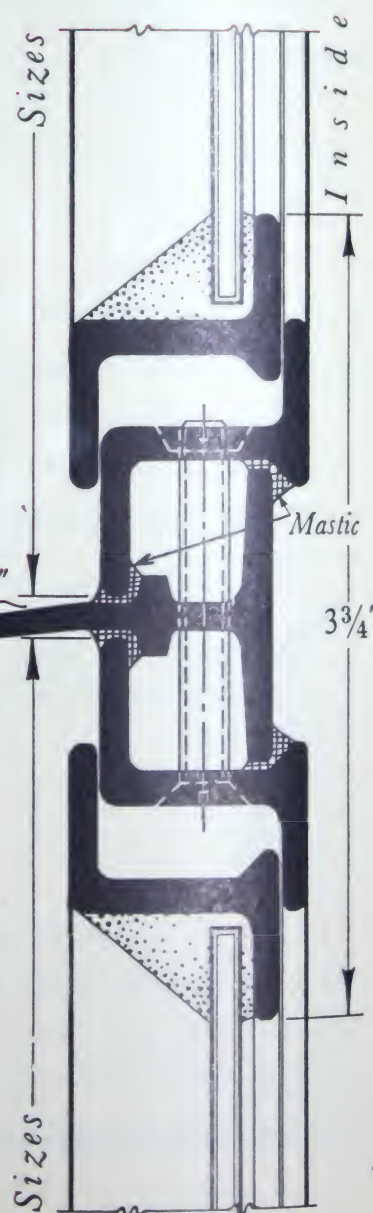


Side Hung Casement



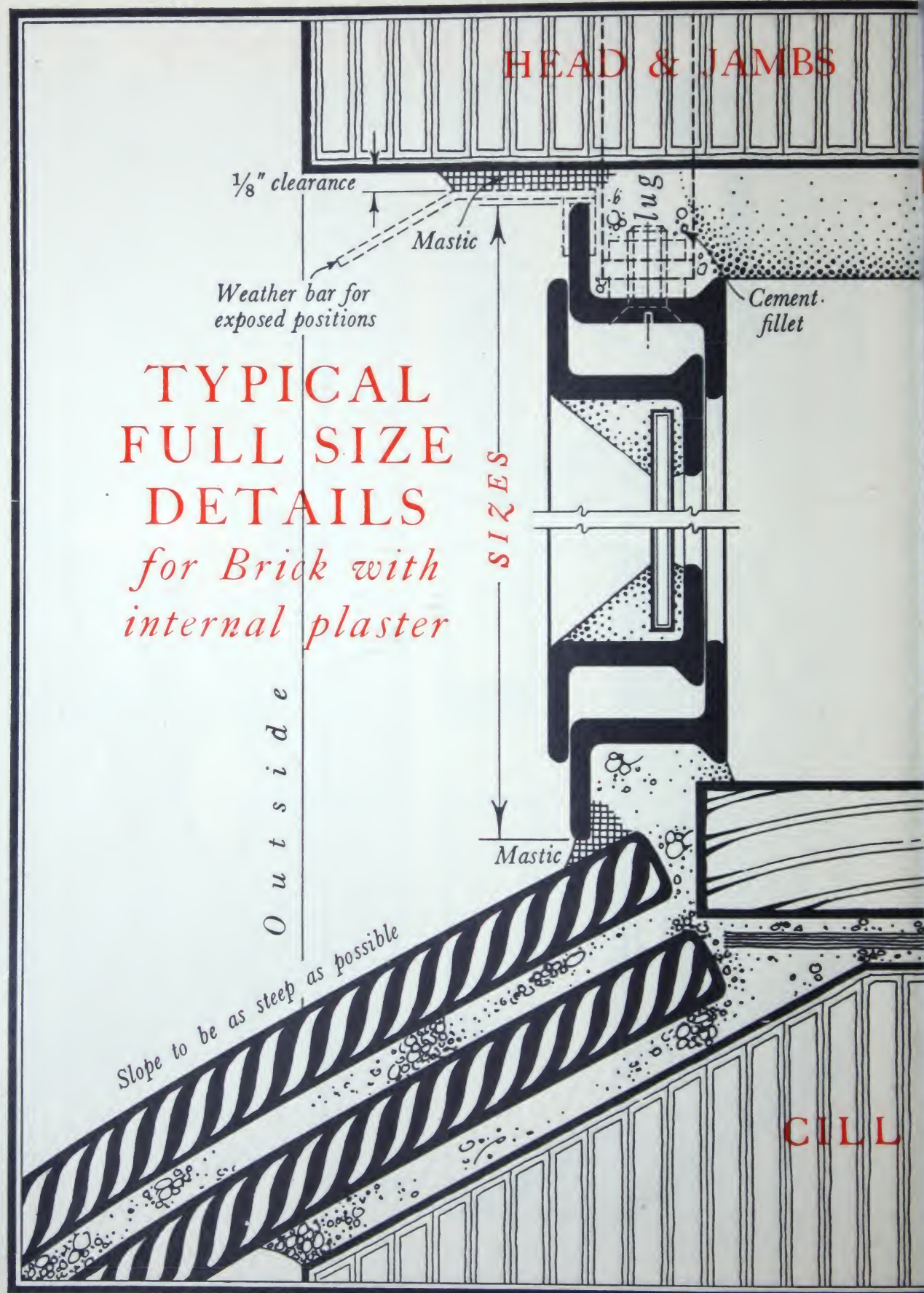
Mullion coupling  
member

Transom  
coupling member

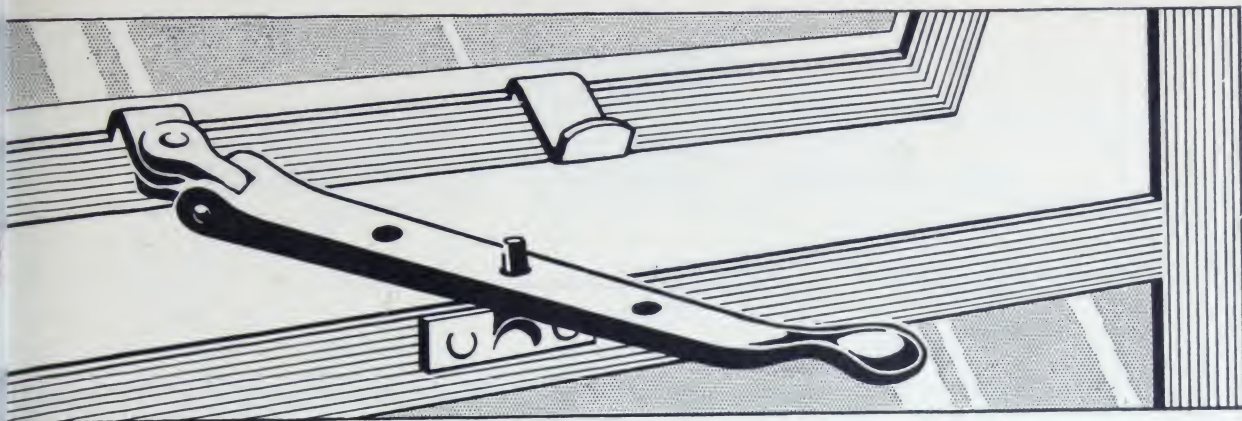


See page 9 for Full Size Detail for Larder Window









## WINDOW FITTINGS

Top Hung Ventilators are hung on galvanized steel hinges with sherardized pins and fitted with a bronze or aluminium peg stay.

Bottom Hung Ventilators (larger windows) are fitted with spring catch and a handle arm which may be lifted to release ventilators for cleaning. Fly-screens are supplied on request.

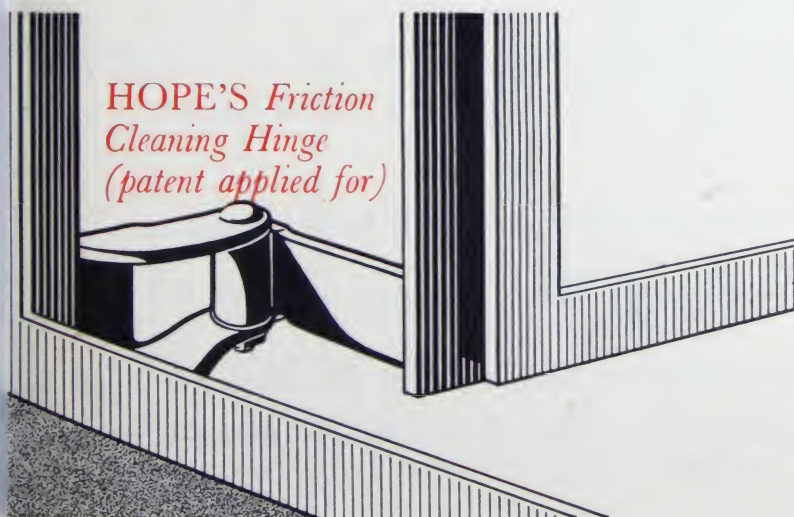
Side Hung Casements are hung on galvanized FRICTION CLEANING HINGES which hold the casement firmly in any position without the need for any form of stay and also allow ample room for cleaning the glass from inside.

HOPE'S Non-projecting Sliding Stay can still be fitted to side hung casements at a small extra cost, if ordered specially.

HOPE'S 2-point handle with patent friction mounting holds the casement open one inch for a little ventilation, works smoothly and does not drop when closed.

FINISH: Handles and stays, unless otherwise ordered, are supplied unfinished. Polished or chromium-plated fittings supplied on request at small extra cost.

HOPE'S Friction  
Cleaning Hinge  
(patent applied for)



Patent No.  
563580



HOPE'S  
2-point Handle



## NOTES

### *on Fixing, Glazing & Painting*

---

THE best made windows may prove unsatisfactory if the fixing and glazing is carelessly done; we have a large staff of outworkers and will gladly carry out this work in any part of the country.

Where customers prefer to fix and glaze with their own labour we would respectfully urge them to insist on the following precautions.

*Handling and Storage* Galvanized Windows may be stored in the open without detriment; they must, however, be kept clean and free from mud, plaster or cement. They should be stacked vertically on edge on level battens, with hinges and fittings clear of one another.

*Fixing* Whenever possible fixing of windows should be postponed until rougher trades have left the site. If they are to be built in, particular care must be taken to see that they are not damaged by scaffold boards placed on the cills or on the glazing bars.

Windows must be secured dead plumb and level in the openings and free from twist. Special care should be taken with metal doors.

When fixing to straight brickwork or concrete the channels of the outer frames must be well filled with a continuous fillet of 3 to 1 cement.

When fixing to wood frames, stonework, rebated brick or rebated concrete, the windows must be bedded in mastic at the rate of 1 lb. to 5 lineal feet; we manufacture our own special mastic and supply it where required at extra cost.

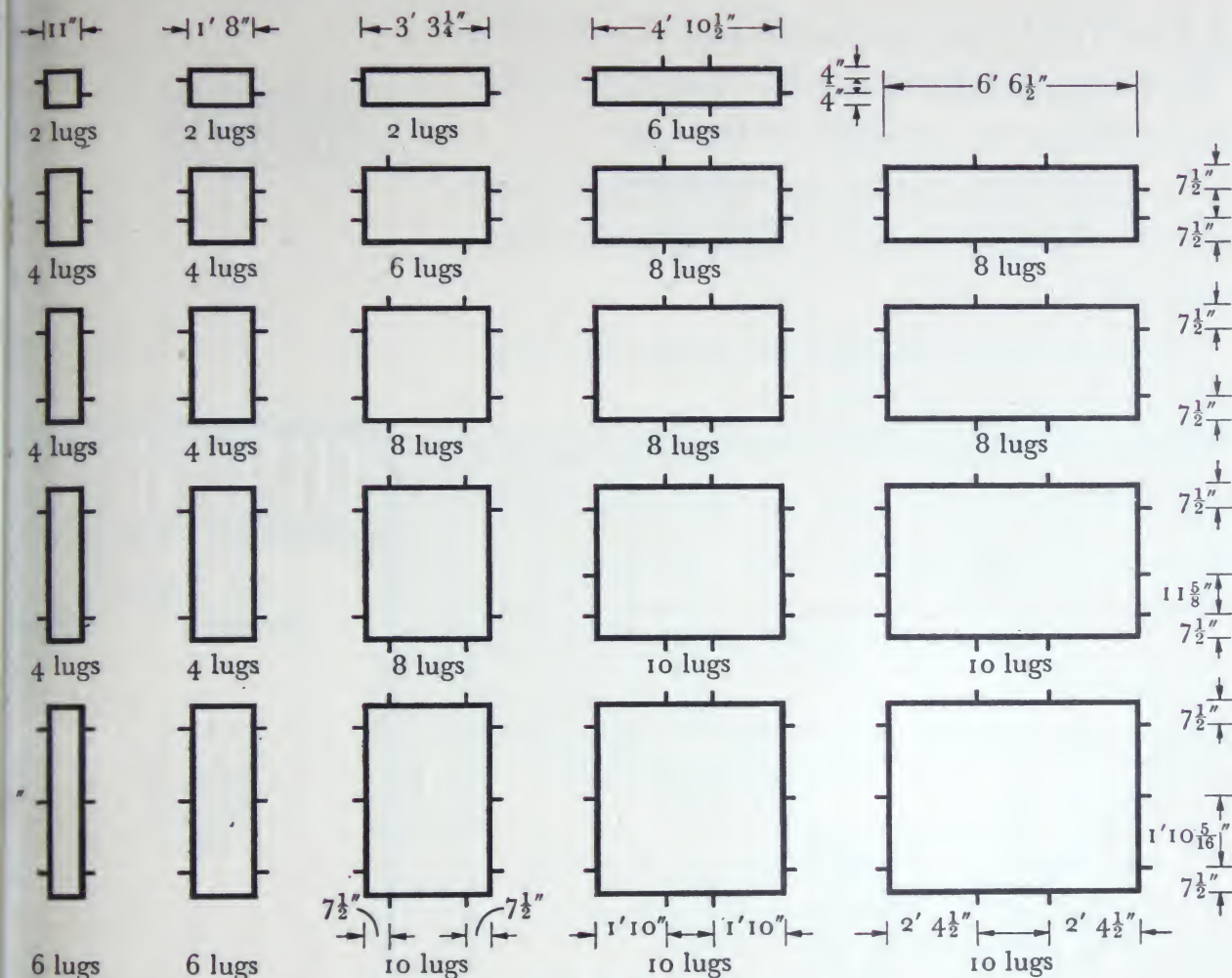
Outside rendering must be kept well clear of hinges and ventilators.

Full size details of Heads, Jambs and Cills are shown on page 6.

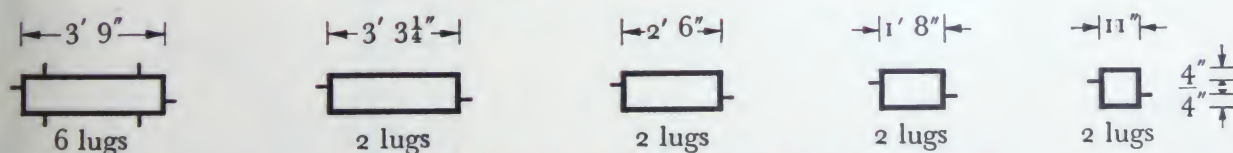
*Ventilators* All ventilators and doors are secured before despatch in the manner shown below, in order that they may arrive on the site in good



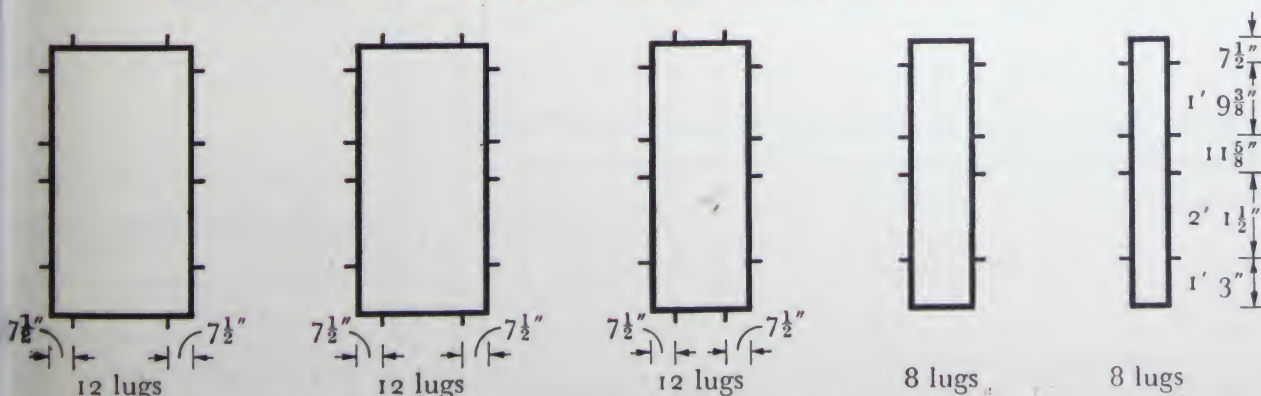
## LUGS FOR WINDOWS



## LUGS FOR FANLIGHTS



## LUGS FOR DOORS AND SIDELIGHTS



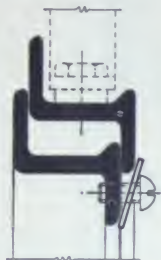
The above diagrams show fixing hole centres; see detail opposite for actual lug positions. Additional holes to those shown above are drilled in window frames, and should be filled in with mastic when fixing.



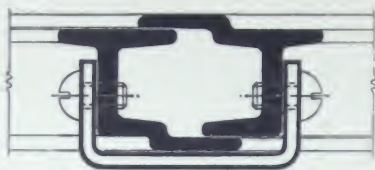
# WINDOWS • *Galvanized*

condition. Screws securing doors must be removed for fixing but should be replaced until the last moment before glazing.

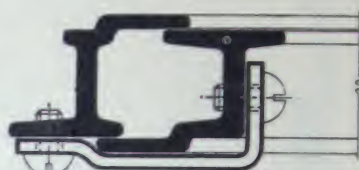
## HALF FULL SIZE DETAILS



STANDARD  
WINDOW



DOUBLE DOORS  
*Meeting Rail*



SINGLE DOORS

## *Composite Windows*

Great care must be taken in handling, and especially in unpacking composite windows, to see that the coupling bolts do not become strained and the mastic pointing broken.

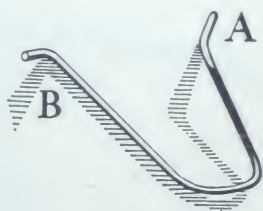
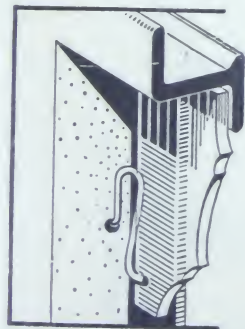
Windows exceeding 6 ft. in height or 8 ft. 3 in. in width must be assembled (in whole or in part) by the customer on the site; the coupling joints must be thoroughly bedded in mastic before assembly and we supply mastic for this free of charge.

## *Glass, Glazing and Putty*

Detailed glazing instructions are sent with each consignment of windows, and should be strictly followed.

Ordinary glazier's putty is not suitable for glazing metal windows as the steel will not absorb the excessive quantity of oil; we supply a special quick-setting metallic putty on request.

HOPE'S Spring Glazing Clips are supplied for securing larger panes in 'N' type windows.



Fix as follows: Fit A into the hole in the window frame, leaving the clip resting on the glass. Press portion B along the glass towards the frame until it springs into position in the clearance between the edge of the glass and the steel frame.

## *Painting*

Galvanized windows should not be painted until four or five weeks after delivery, to allow the galvanized surface to weather. We recommend that paint to one of the following B. S. Specifications should be used as a priming coat: B.S. 295/1936 red oxide and B.S. 278/1936 zinc oxide.

Putty must not be painted until it has properly set.



## Fixing Materials

When ordering, state whether fixing to brickwork, wood, concrete or steel, when the appropriate materials will be provided, as follows:

Lugs, slotted and reversible, with sherardized screws and nuts, are provided where windows are fixed direct to masonry.

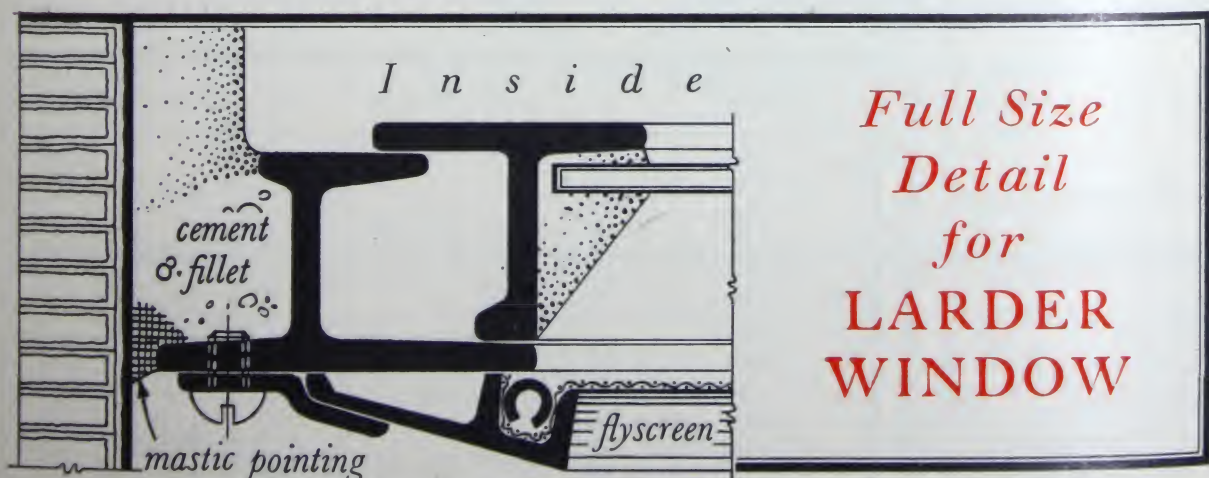
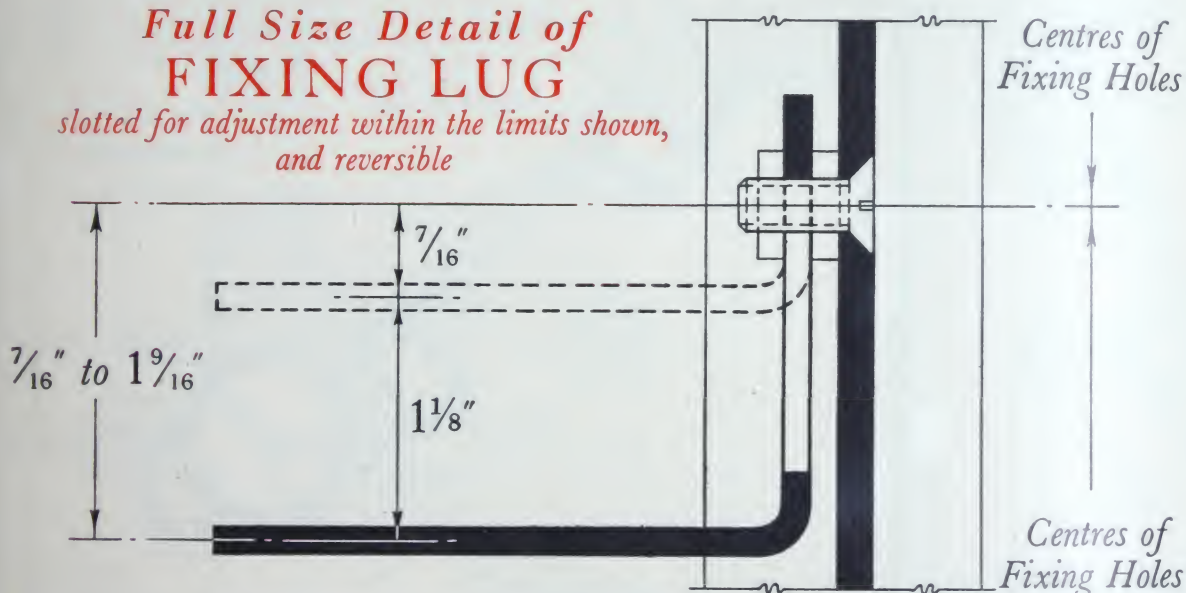
Wood Screws,  $1\frac{1}{4}$ " No. 10 sherardized, are provided, when fixing to wood, concrete or stone.

When fixing to steelwork, customer should provide details of openings so that correct fixing materials can be supplied.

Windows with steel sub-frames (see pages 16-17) are screwed into the sub-frames before despatch.

### Full Size Detail of FIXING LUG

*slotted for adjustment within the limits shown,  
and reversible*





## NOTES

*on Fixing, Glazing & Painting*

---

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When fixing to wood frames, stonework, rebated brick or rebated concrete, the windows must be bedded in mastic at the rate of 1 lb. to 5 lineal feet; we manufacture our own special mastic and supply it where required at extra cost.

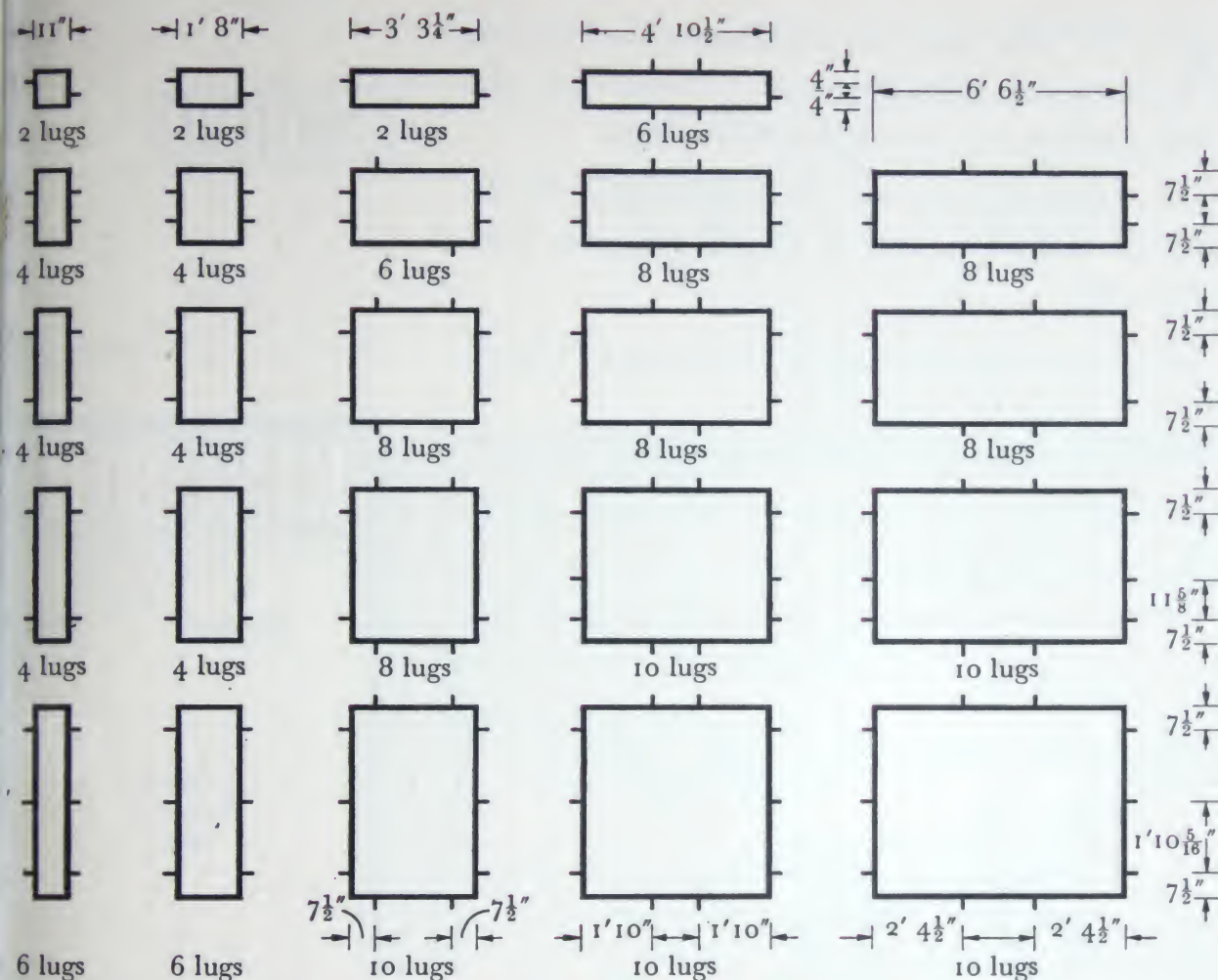
Outside rendering must be kept well clear of hinges and ventilators.

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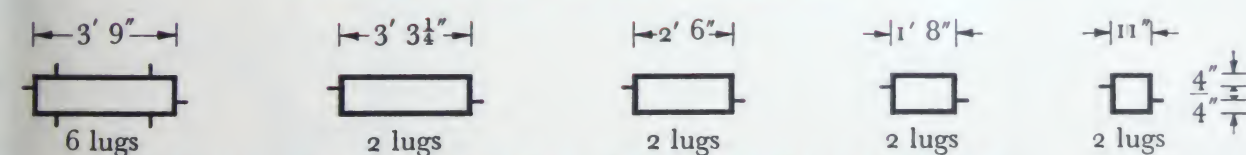
*Ventilators* All ventilators and doors are secured before despatch in the manner shown below, in order that they may arrive on the site in good



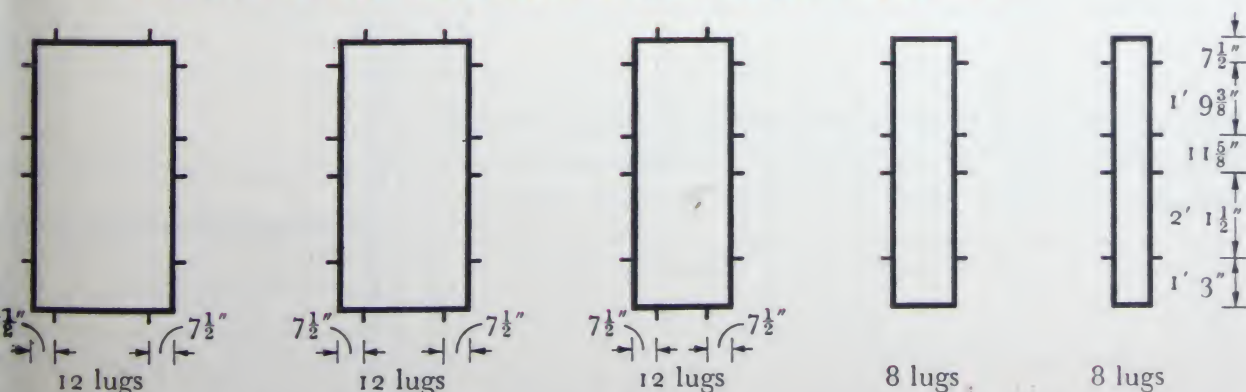
## LUGS FOR WINDOWS



## LUGS FOR FANLIGHTS



## LUGS FOR DOORS AND SIDELIGHTS



The above diagrams show fixing hole centres; see detail opposite for actual lug positions. Additional holes to those shown above are drilled in window frames, and should be filled in with mastic when fixing.



ALL-STEEL bays may be obtained by coupling Standard Windows with tubular or solid round mullions at the angles of the bays.

Five types of bays are illustrated with tubular mullions of  $1\frac{11}{16}$ " diameter, which are most commonly used.

Tables showing dimensions for setting out brickwork are given for each bay.

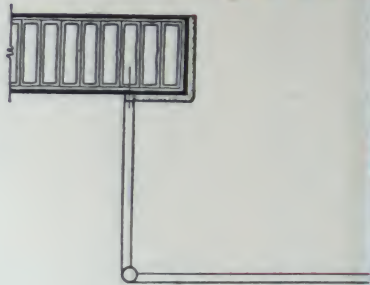
Where  $1\frac{11}{16}$ " diameter tubes are not strong enough, other mullions can be used, as tabulated below. Size of tube to be specified when ordering.

TUBULAR MULLIONS		
A	1 $\frac{11}{16}$ " dia. tube	with 4 $\frac{1}{2}$ " dia. cast iron caps and bases sent loose.
B	1 $\frac{29}{32}$ " dia. tube	
C	2 $\frac{3}{8}$ " dia. tube	
D	1 $\frac{11}{16}$ " dia. tube	with 4" $\times$ 4" $\times$ $\frac{3}{8}$ " steel base and cap plates welded on.
E	1 $\frac{29}{32}$ " dia. tube	
F	2 $\frac{3}{8}$ " dia. tube	with 6" $\times$ 6" $\times$ $\frac{3}{8}$ " steel base and cap plates welded on.
G	2" dia. solid	

SAFE LOADS IN TONS							
Height	A	B	C	D	E	F	G
Up to 3' 0"	1.00	1.25	1.75	1.50	2.00	2.75	5.50
3' 0" to 4' 0"	0.75	1.17	1.50	1.25	1.75	2.50	4.75
4' 0" to 5' 0"	0.50	0.90	1.25	1.00	1.50	2.25	4.00
5' 0" to 6' 0"	0.20	0.60	1.00	0.75	1.00	2.00	3.25

Allowance has been made for eccentricity of loading.

SQUAR



WINDOW FRAMES ARE NOT DESIGNED TO CARRY WEIGHT

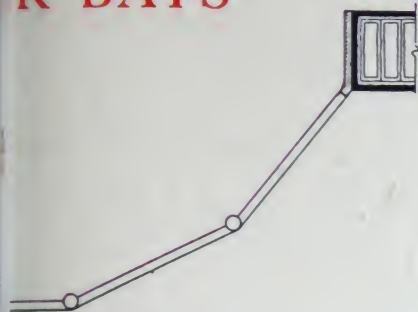
Width of Lights on Front		1' 8"
WIDTHS	1 Light return	1' 10 $\frac{1}{8}$ '
	2 Light return	1' 10 $\frac{1}{8}$ '



# WINDOWS *in Bays*

II

Half Full Size  
OR BAYS



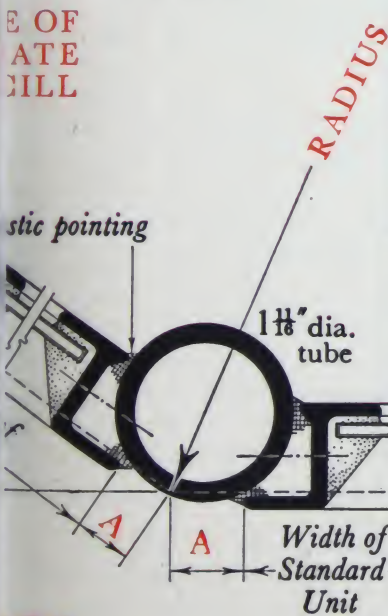
Oriel BAYS



## DIMENSIONS 'A'

3 Light Bays  $\frac{11}{16}$ "  
All others  $\frac{1}{2}$ "

Inside



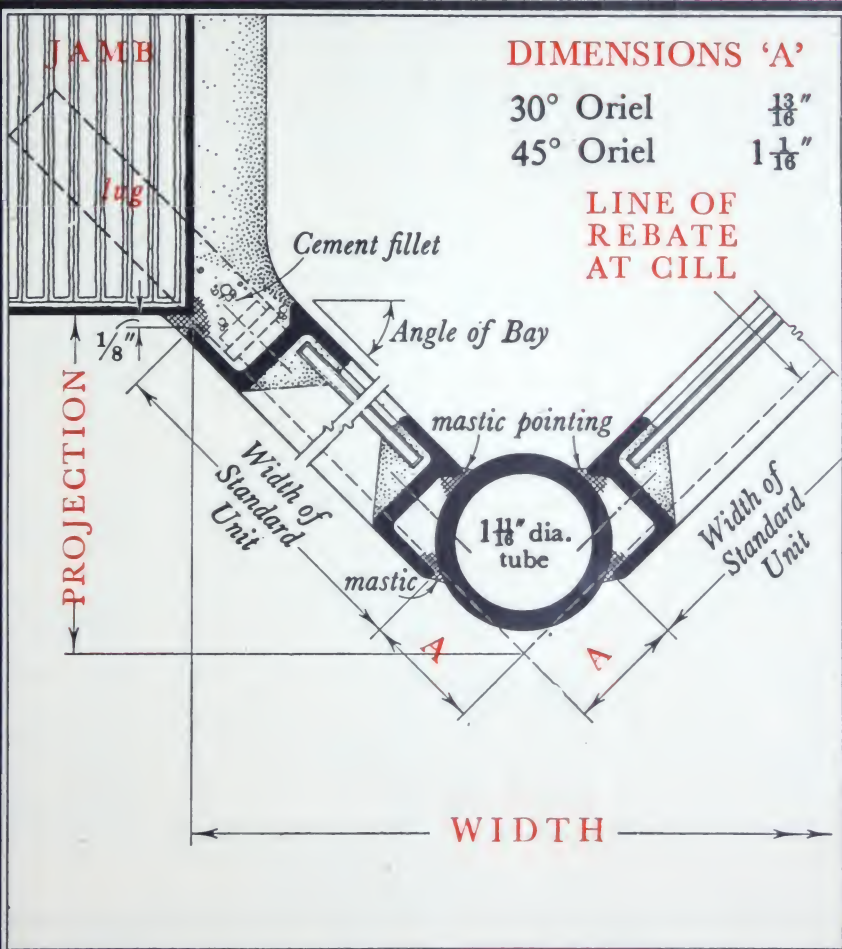
5	6	7	8
7' 6"	9' 0"	10' 6"	12' 0"
7' $\frac{7}{16}$ "	5' $\frac{65}{8}$ "	6' $5\frac{13}{16}$ "	7' 5"
1' 10"	2' $3\frac{9}{16}$ "	2' $7\frac{7}{16}$ "	3' $0\frac{3}{4}$ "

## JAMB

## DIMENSIONS 'A'

30° Oriel  $\frac{13}{16}$ "  
45° Oriel  $1\frac{1}{16}$ "

LINE OF  
REBATE  
AT CILL



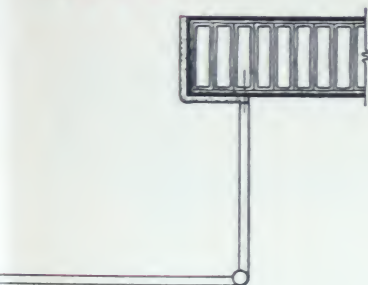
No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1' 8" wide	2' $11\frac{7}{8}$ "	30°	10 $\frac{1}{2}$ "
2 Light splay 3' $3\frac{1}{4}$ " wide	5' $9\frac{1}{8}$ "		1' $8\frac{1}{4}$ "
1 Light splay 1' 8" wide	2' $5\frac{3}{4}$ "	45°	1' $2\frac{7}{8}$ "
2 Light splay 3' $3\frac{1}{4}$ " wide	4' 9"		2' $4\frac{1}{2}$ "



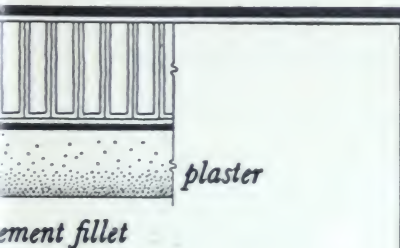
# WINDOWS *in Bays*

Details are Half Full Size

## BAYS

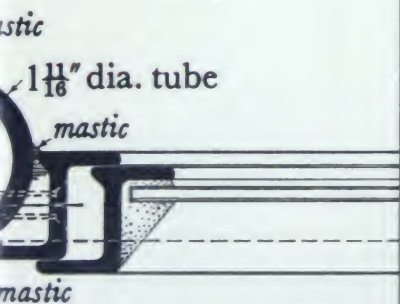


## SPLAYED BAYS



LINE OF  
REBATE  
AT CILL

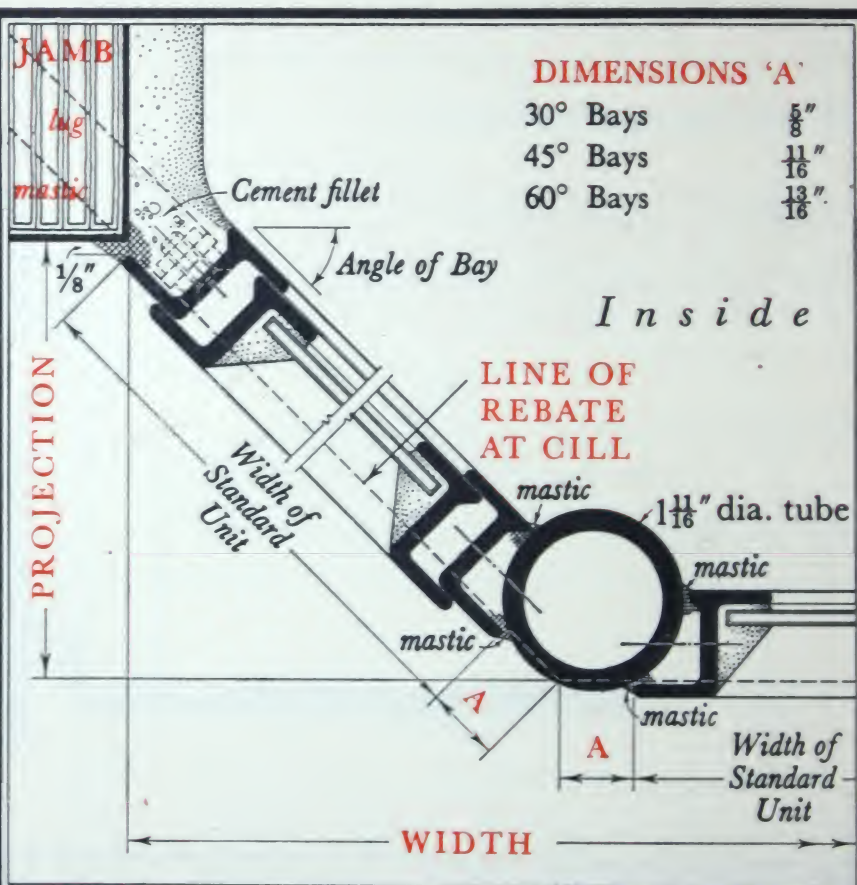
*Inside*



Width of  
Standard  
Unit

WIDTH

3 1/4"	4' 10 1/2"	6' 6 1/2"	Projection approx.
5 3/8"	5' 0 5/8"	6' 8 13/16"	1' 9 1/4"
5 3/8"	5' 0 5/8"	6' 8 13/16"	3' 4 1/2"



DIMENSIONS 'A'

30° Bays	5/8"
45° Bays	1 1/16"
60° Bays	1 3/16"

*Inside*

LINE OF  
REBATE  
AT CILL

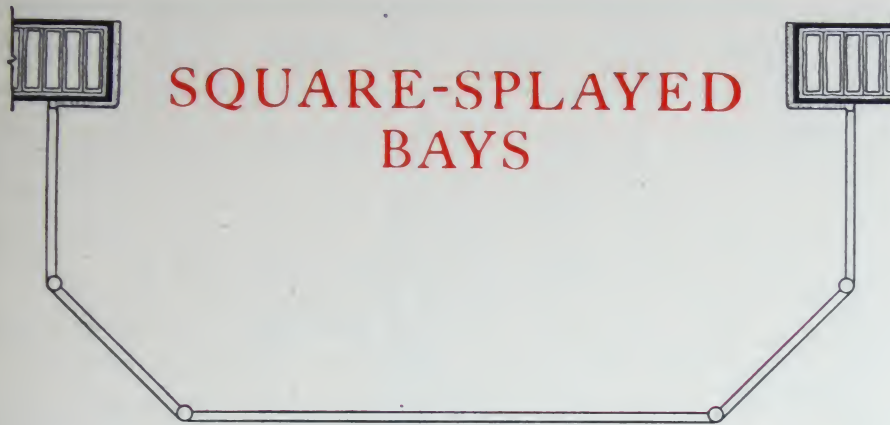
1 1/16" dia. tube

WIDTH

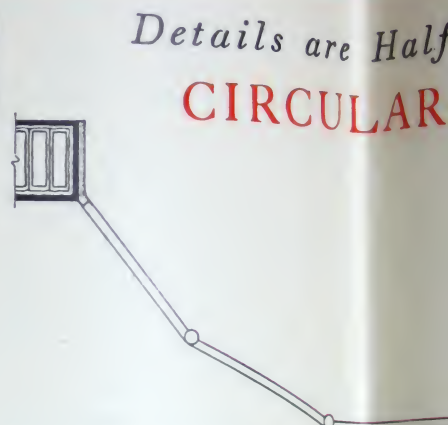
Width of Lights on Front		1' 8"	3' 3 1/4"	4' 10 1/2"	6' 6 1/2"	Angle	Projection approx.
WIDTHS	1 Light return	4' 8 3/4"	6' 4"	7' 11 1/4"	9' 7 7/16"	30°	10 3/8"
	2 Light return	7' 6 3/8"	9' 1 5/8"	10' 8 7/8"	12' 5 1/16"		1' 8"
	1 Light return	4' 2 1/2"	5' 9 3/4"	7' 5"	9' 1 3/16"	45°	1' 2 5/8"
	2 Light return	6' 5 7/8"	8' 1 1/8"	9' 8 3/8"	11' 4 9/16"		2' 4 3/8"
	1 Light return	3' 6 3/8"	5' 1 5/8"	6' 8 7/8"	8' 5 1/16"	60°	1' 6"
	2 Light return	5' 1 3/4"	6' 9"	8' 4 1/4"	10' 0 7/16"		2' 10 3/4"



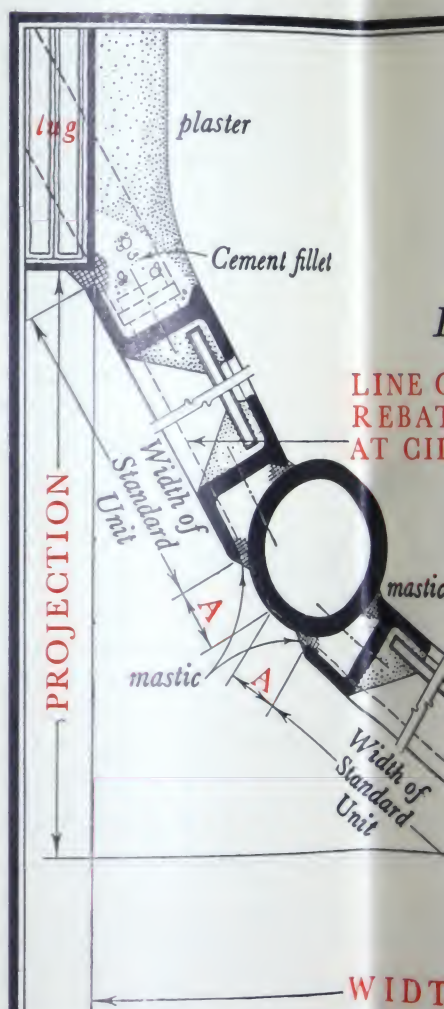
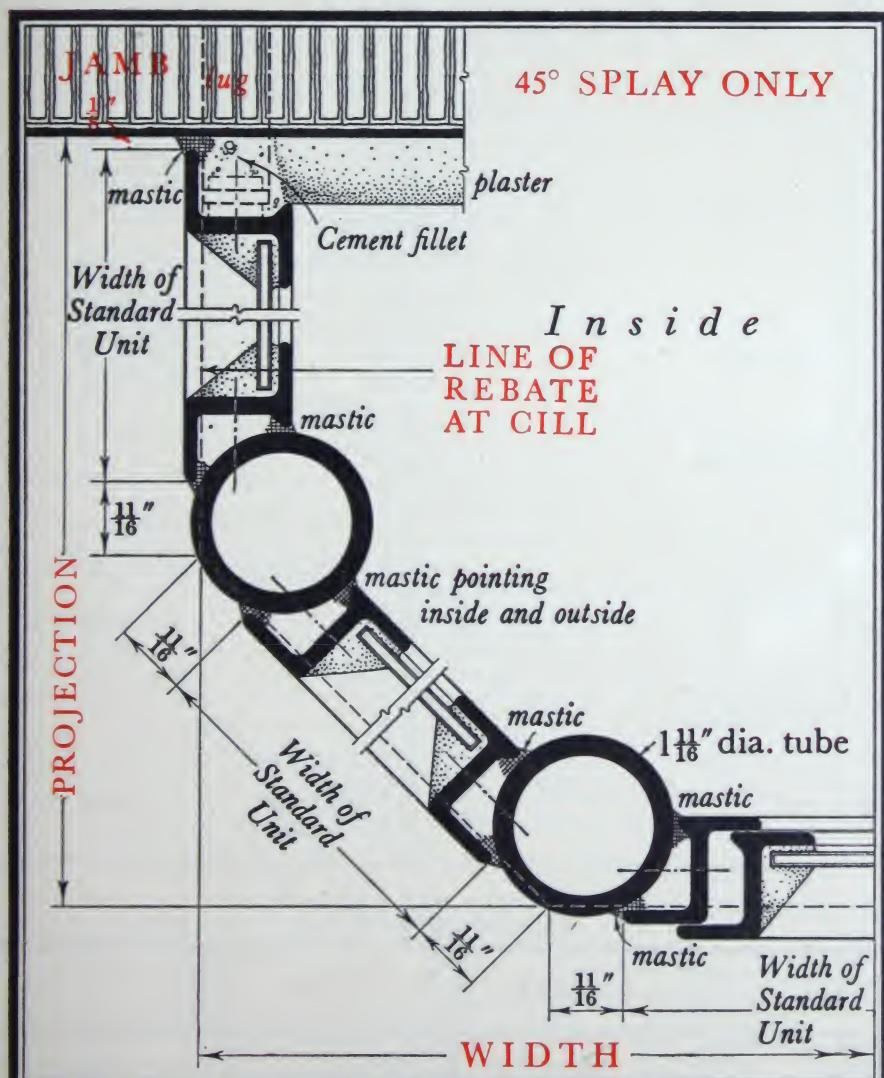
# Details of HOPE'S W



**SQUARE-SPLAYED  
BAYS**



*Details are Half*  
**CIRCULAR**

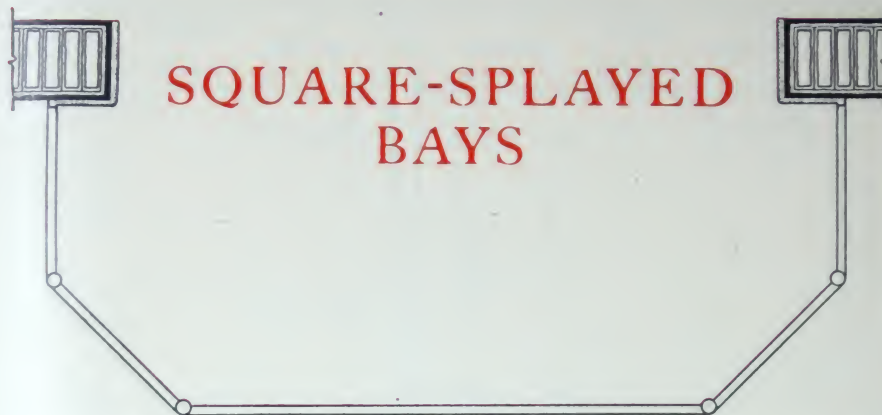


Width of Lights on Front		1' 8"	3' 3 $\frac{1}{4}$ "	4' 10 $\frac{1}{2}$ "	6' 6 $\frac{1}{2}$ "	Angle	Projection approx.
WIDTHS	1 Light splay and return	4' 3 $\frac{5}{8}$ "	5' 10 $\frac{7}{8}$ "	7' 6 $\frac{1}{8}$ "	9' 2 $\frac{5}{16}$ "	45°	2' 11 $\frac{7}{8}$ "
	2 Light splay and return	6' 6 $\frac{7}{8}$ "	8' 2 $\frac{1}{8}$ "	9' 9 $\frac{3}{8}$ "	11' 5 $\frac{9}{16}$ "		5' 8 $\frac{3}{4}$ "

No. of Lights 1' 8" wide	3	4	5
Widths	4' 6"	6' 4"	7'
Radius	2' 8"	4' 7 $\frac{1}{4}$ "	4' 7"
Projection approx.	1' 1"	1' 3 $\frac{1}{8}$ "	1' 1"



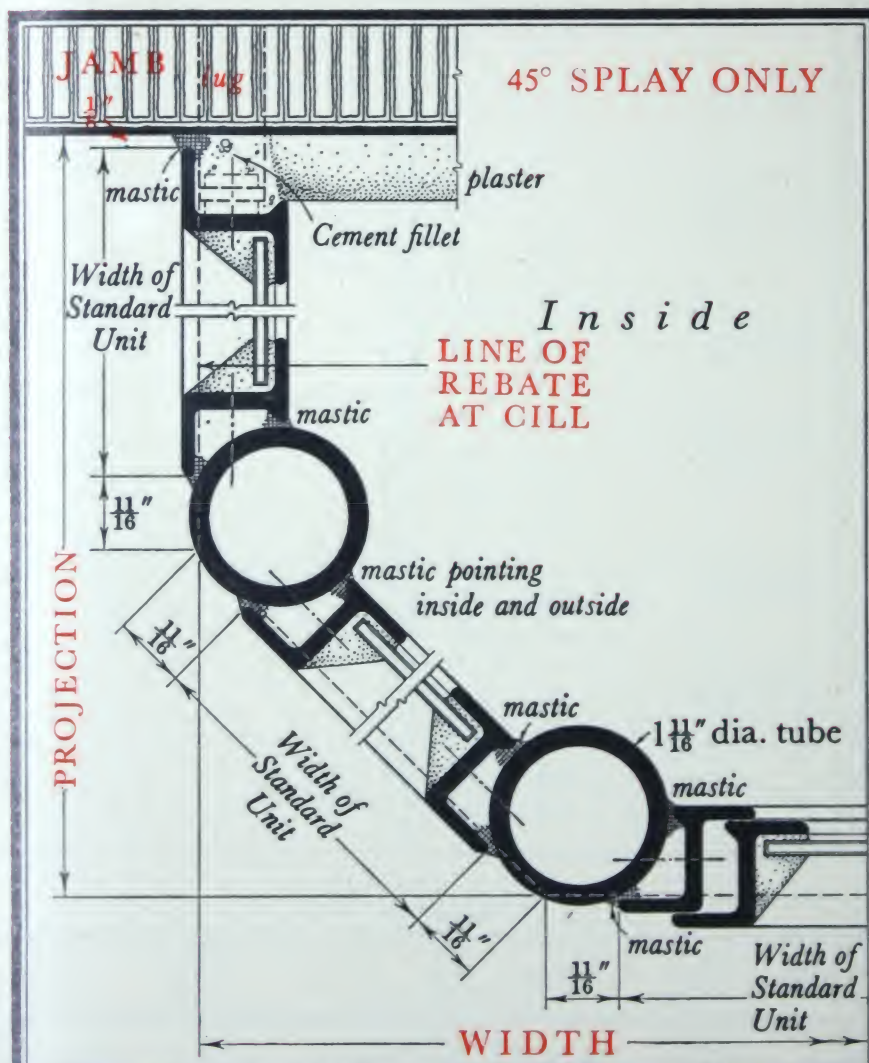
# Details of HOPE'S



**SQUARE-SPLAYED  
BAYS**



*Details of*  
**CIRCULAR**



Width of Lights on Front		1' 8"	3' 3 1/4"	4' 10 1/2"	6' 6 1/2"	Angle	Projection approx.
WIDTHS	1 Light splay and return	4' 3 5/8"	5' 10 7/8"	7' 6 1/8"	9' 2 5/16"	45°	2' 11 7/8"
	2 Light splay and return	6' 6 7/8"	8' 2 1/8"	9' 9 3/8"	11' 5 9/16"		5' 8 3/4"

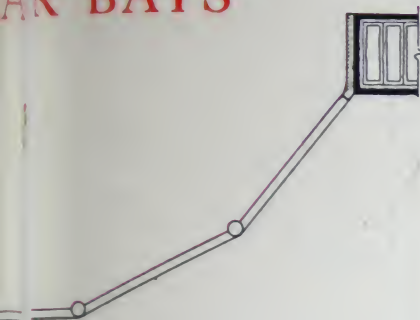
No. of Lights 1' 8" wide	3	4
Widths	4' 6"	4' 6"
Radius	2' 8"	7 1/4'
Projection approx.	1' 1"	3 1/2'



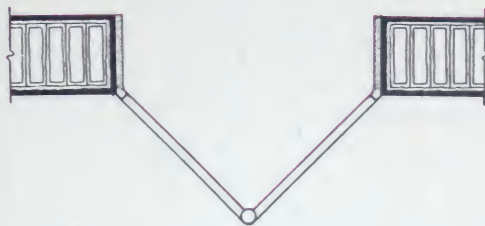
# WINDOWS *in Bays*

II

## Half Full Size AR BAYS



## ORIEL BAYS

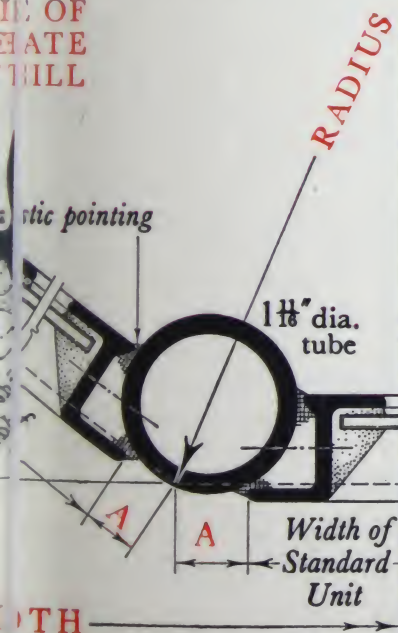


### DIMENSIONS 'A'

3 Light Bays  $\frac{11}{16}"$   
All others  $\frac{1}{2}"$

Inside

LINE OF  
REBATE  
AT CILL



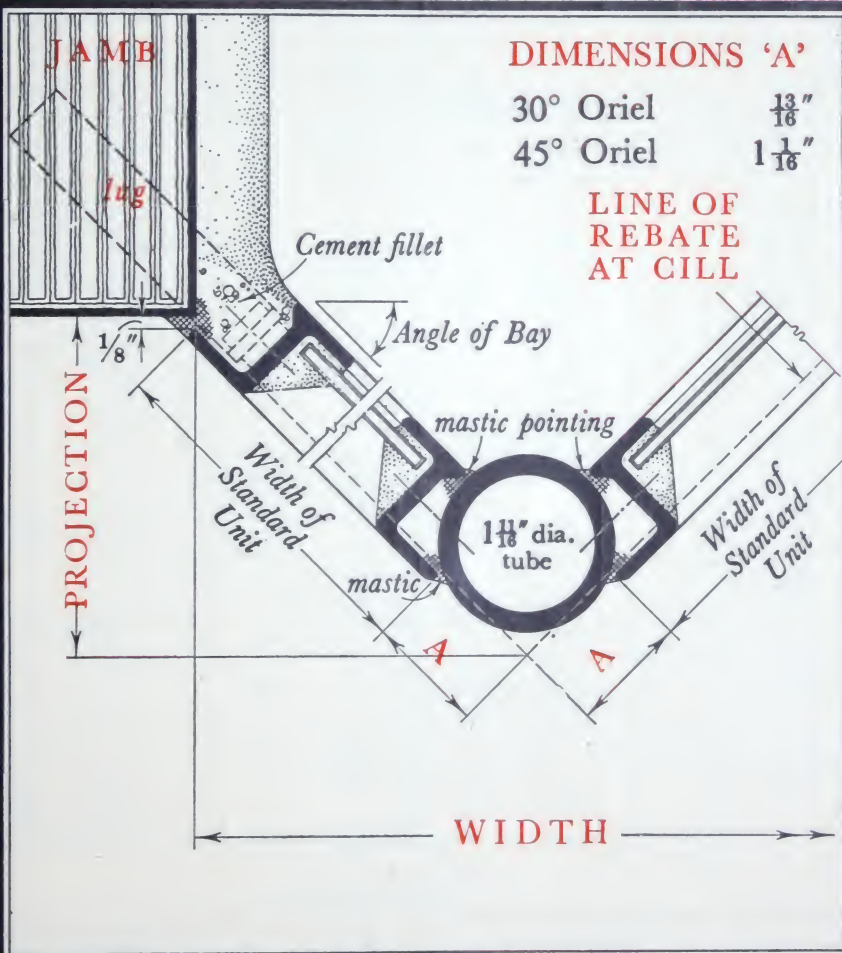
WIDTH

5	6	7	8
7' 6"	9' 0"	10' 6"	12' 0"
7' $\frac{7}{16}"$	5' $\frac{6}{8}"$	6' $5\frac{13}{16}"$	7' 5"
1' 10"	2' $3\frac{9}{16}"$	2' $7\frac{7}{16}"$	3' $0\frac{3}{4}"$

### DIMENSIONS 'A'

30° Oriel  $\frac{13}{16}"$   
45° Oriel  $1\frac{1}{16}"$

LINE OF  
REBATE  
AT CILL



No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1' 8" wide	2' $11\frac{7}{8}"$	30°	10 $\frac{1}{2}"$
2 Light splay 3' $3\frac{1}{4}"$ wide	5' $9\frac{1}{8}"$		1' $8\frac{1}{4}"$
1 Light splay 1' 8" wide	2' $5\frac{3}{4}"$	45°	1' $2\frac{7}{8}"$
2 Light splay 3' $3\frac{1}{4}"$ wide	4' 9"		2' $4\frac{1}{2}"$



ALL-STEEL bays may be obtained by coupling Standard Windows with tubular or solid round mullions at the angles of the bays.

Five types of bays are illustrated with tubular mullions of 1 1/8" diameter, which are most commonly used.

Tables showing dimensions for setting out brickwork are given for each bay.

Where 1 1/8" diameter tubes are not strong enough, other mullions can be used, as tabulated below. Size of tube to be specified when ordering.

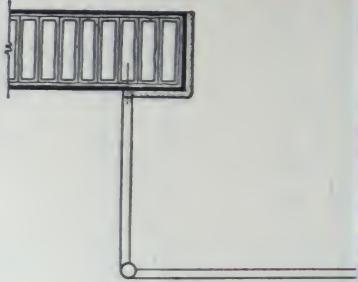
TUBULAR MULLIONS		
A	1 $\frac{11}{16}$ " dia. tube	with 4 $\frac{1}{2}$ " dia. cast iron caps and bases sent loose.
B	1 $\frac{29}{32}$ " dia. tube	
C	2 $\frac{3}{8}$ " dia. tube	
D	1 $\frac{11}{16}$ " dia. tube	with 4" $\times$ 4" $\times$ $\frac{3}{8}$ " steel base and cap plates welded on.
E	1 $\frac{29}{32}$ " dia. tube	
F	2 $\frac{3}{8}$ " dia. tube	with 6" $\times$ 6" $\times$ $\frac{3}{8}$ " steel base and cap plates welded on.
G	2" dia. solid	

SAFE LOADS IN TONS							
Height	A	B	C	D	E	F	G
Up to 3' 0"	1.00	1.25	1.75	1.50	2.00	2.75	5.50
3' 0" to 4' 0"	0.75	1.17	1.50	1.25	1.75	2.50	4.75
4' 0" to 5' 0"	0.50	0.90	1.25	1.00	1.50	2.25	4.00
5' 0" to 6' 0"	0.20	0.60	1.00	0.75	1.00	2.00	3.25

Allowance has been made for eccentricity of loading.

WINDOW FRAMES ARE NOT DESIGNED TO CARRY WEIGHT

SQUARE





# WINDOWS in Bays

## Half Full Size AR BAYS



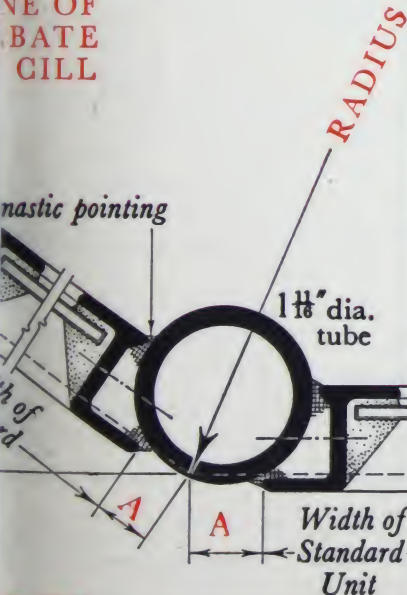
## Oriel BAYS



**DIMENSIONS 'A'**  
3 Light Bays  $\frac{11}{16}$ "  
All others  $\frac{1}{2}$ "

Inside

LINE OF  
REBATE  
AT CILL

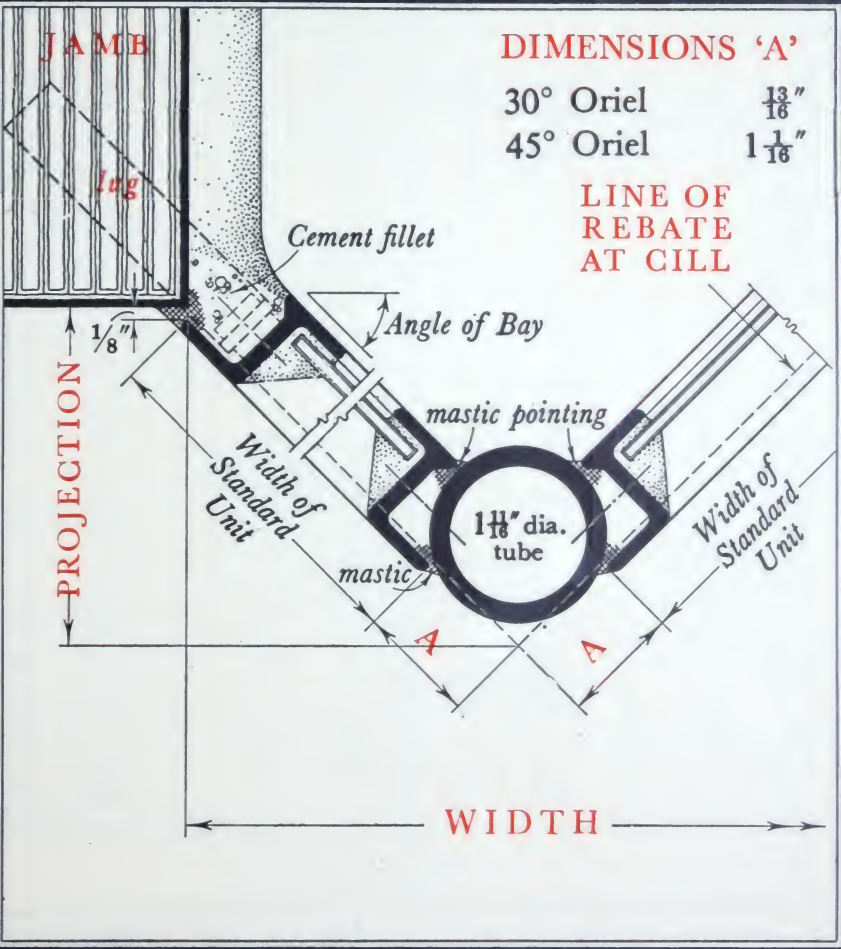


DTH

5	6	7	8
7' 6"	9' 0"	10' 6"	12' 0"
4' $7\frac{7}{16}$ "	5' $6\frac{5}{8}$ "	6' $5\frac{13}{16}$ "	7' 5"
1' 10"	2' $3\frac{9}{16}$ "	2' $7\frac{7}{16}$ "	3' $0\frac{3}{4}$ "

**DIMENSIONS 'A'**  
30° Oriel  $\frac{13}{16}$ "  
45° Oriel  $1\frac{1}{16}$ "

LINE OF  
REBATE  
AT CILL



No. of Lights on splays	Widths	Angle	Projection approx.
1 Light splay 1' 8" wide	2' $11\frac{7}{8}$ "	30°	10½"
2 Light splay 3' $3\frac{1}{4}$ " wide	5' $9\frac{1}{8}$ "		1' $8\frac{1}{4}$ "
1 Light splay 1' 8" wide	2' $5\frac{3}{4}$ "	45°	1' $2\frac{7}{8}$ "
2 Light splay 3' $3\frac{1}{4}$ " wide	4' 9"		2' $4\frac{1}{2}$ "



TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
NG6	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$	NC6	1	34 $\frac{1}{2}$ × 9 $\frac{1}{4}$	ND6	1	46 $\frac{1}{8}$ × 9 $\frac{1}{4}$
NG5	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 9 $\frac{1}{4}$	ND6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 9 $\frac{1}{4}$
NG1	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$	NC5	1	34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND5	1	46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NG2	1 1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NG8	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC5E	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	ND5E	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$
NG3	1 2	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC1	1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$	ND1	1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$
NE6	1	22 $\frac{7}{8}$ × 9 $\frac{1}{4}$	NC2F	1 1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND2F	1 1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NE6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	NC2	1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND2	1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NE5	1	22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	NC4F	2 1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND4F	2 1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NE5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	NC4	2 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND4	2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NE1	1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$	NC11F	2 1 1 2	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 38 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$	ND11F	2 1 2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 34 $\frac{1}{2}$ × 38 $\frac{1}{4}$
NES1	1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$	NC11	2 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 38 $\frac{1}{4}$	ND11	2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 38 $\frac{1}{4}$
NE2	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NES2	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NE3	1 2	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NE11	2 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 38 $\frac{1}{4}$						

DOORS

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
NA25	2 2 1 1	33 $\frac{1}{8}$ × 19 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 15 $\frac{1}{8}$	NA2	2 2 1 1	33 $\frac{1}{8}$ × 16 $\frac{1}{4}$ 22 $\frac{7}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 12 $\frac{1}{4}$
			NA15	1 1 1	33 $\frac{1}{8}$ × 25 $\frac{3}{8}$ 22 $\frac{7}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 21 $\frac{3}{8}$

SIDE

TYPE
NA5
NA6



TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
HD <sub>4</sub>	4 4 4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD <sub>2</sub> /S	2 1 3 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>1</sub> /S	2 2 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>11</sub> F	4 4 1 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HD <sub>4</sub> F/S	4 2 1 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>2</sub> F/S	2 2 1 3 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>11</sub>	4 4 4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HD <sub>4</sub> /S	4 2 3 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>2</sub> /S	2 2 4 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>6</sub> /S	3 1	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 9 $\frac{1}{4}$	HD <sub>11</sub> F/S	4 2 1 2 2 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>4</sub> F/S	4 4 1 3 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>6</sub> F/S	1 2 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 9 $\frac{1}{4}$	HD <sub>11</sub> /S	4 2 3 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>4</sub> /S	4 4 4 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>5</sub> /S	3 1	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>6</sub> /S	4 1	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 9 $\frac{1}{4}$	HDV <sub>11</sub> F/S	4 4 1 2 3 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>5</sub> F/S	1 2 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>6</sub> F/S	1 3 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 9 $\frac{1}{4}$	HDV <sub>11</sub> /S	4 4 4 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 38 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD <sub>1</sub> /S	2 1 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>5</sub> /S	4 1	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HL <sub>1</sub>	2	10 $\frac{1}{4}$ × 16 $\frac{1}{8}$
HD <sub>2</sub> F/S	2 1 1 2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV <sub>5</sub> F/S	1 3 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$ 10 $\frac{5}{8}$ × 18 $\frac{1}{4}$			

## GHTS

SIZES
11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
11 $\frac{3}{8}$ × 9 $\frac{1}{4}$

## FANLIGHTS

TYPE	NO. OFF	SIZES
NG <sub>25</sub>	2	9 $\frac{3}{4}$ × 21 $\frac{1}{8}$
NG <sub>25</sub> F	1 1	8 $\frac{5}{8}$ × 20 9 $\frac{3}{4}$ × 21 $\frac{1}{8}$
NG <sub>15</sub>	1	9 $\frac{3}{4}$ × 28 $\frac{1}{4}$
NG <sub>15</sub> F	1	8 $\frac{5}{8}$ × 27 $\frac{1}{8}$
NG <sub>8</sub>	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$

TYPE	NO. OFF	SIZES
NG <sub>2</sub>	1 1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$
NG <sub>5</sub>	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$
NG <sub>1</sub>	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$
NG <sub>6</sub>	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$



# WINDOWS

## GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
ND6/S	1 1	$34\frac{1}{2} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	ND11F/S	2 1 2 1 1 2	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{3}{4}$ $22\frac{7}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV2/S	1 1 2	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
ND6F/S	1 1 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $22\frac{7}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	ND11/S	2 1 1 2	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV4F/S	2 1 1 3	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
ND5/S	1 1	$34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV6/S	1 1	$46\frac{1}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	NDV4/S	2 1 3	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
ND5F/S	1 1 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV6F/S	1 1 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $34\frac{1}{2} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	NDV11F/S	2 1 2 1 1 2	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{3}{4}$ $34\frac{1}{2} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
ND1/S	1 1	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV5/S	1 1	$46\frac{1}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV11/S	2 1 1 1 2	$45\frac{1}{8} \times 17\frac{1}{8}$ $46\frac{1}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
ND2F/S	1 1 1 2	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV5F/S	1 1 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NL1	1	$20\frac{7}{8} \times 16\frac{1}{8}$
ND2/S	1 1 2	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV1/S	1 1	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{5}{8} \times 18\frac{1}{4}$			
ND4F/S	2 1 1 3	$33\frac{1}{2} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $22\frac{7}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	NDV2F/S	1 1 1 2	$45\frac{1}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$			
ND4/S	2 1 3	$33\frac{1}{2} \times 17\frac{1}{8}$ $34\frac{1}{2} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$						

### RIGHTS

NO. OFF	SIZES
	$34\frac{1}{2} \times 18\frac{1}{4}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $22\frac{7}{8} \times 18\frac{1}{4}$
	$34\frac{1}{2} \times 9\frac{1}{4}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $22\frac{7}{8} \times 9\frac{1}{4}$

### FANLIGHTS

TYPE	NO. OFF	SIZES
NG25	2	$9\frac{3}{4} \times 21\frac{1}{8}$
NG25F	1 1	$8\frac{5}{8} \times 20$ $9\frac{3}{4} \times 21\frac{1}{8}$
NG15	1	$9\frac{3}{4} \times 28\frac{1}{4}$
NG15F	1	$8\frac{5}{8} \times 27\frac{1}{8}$
NG8	2	$9\frac{3}{4} \times 18\frac{1}{4}$

TYPE	NO. OFF	SIZES
NG2	1 1	$8\frac{5}{8} \times 17\frac{1}{8}$ $9\frac{3}{4} \times 18\frac{1}{4}$
NG5	1	$9\frac{3}{4} \times 18\frac{1}{4}$
NG1	1	$8\frac{5}{8} \times 17\frac{1}{8}$
NG6	1	$9\frac{3}{4} \times 9\frac{1}{4}$



HORIZONTAL PANE  
TYPES

HOPE'S WI

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
NG6	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$	HE11	4 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HC11F	4 2 1 2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HD1	4 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$
NG5	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC6	3	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC11	4 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HD6	4	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$
NG1	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$	HC6F	1 2	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HD6F	1 3	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HD5	4	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
NG2	1 1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5	3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD5F	1 3	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD5E	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
NG8	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5F	1 2	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD1	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$	HD2F	2 2 1 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
NG3	1 2	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5E	2 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD2	2 2 4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD4F	4 4 1 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
HE6	2	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC1	2 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$						
NE6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC2F	2 1 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
HE5	2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HC2	2 1 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
NE5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HC4F	4 2 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
HE1	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HC4	4 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
HES1	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$									
HE2	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$									
HES2	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$									
HE3	2 4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$									

DOORS

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
HA25	2 9 1	9 $\frac{7}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 15 $\frac{1}{8}$	HA15	1 4 1	9 $\frac{7}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 21 $\frac{3}{8}$
HA2	2 9 1	9 $\frac{7}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 12 $\frac{1}{4}$			

SIDELIG

TYPE	NO. OFF	
HA5	6	
HA6	6	



# HORIZONTAL PANE TYPES

# HOPE'S

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
NG6	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$	HE11	4 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HC11F	4 2 1 2 2	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ × 10 $\frac{1}{4}$ × 11 $\frac{3}{8}$ × 11 $\frac{3}{8}$ ×
NG5	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC6	3	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC11	4 2 3	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ × 11 $\frac{3}{8}$ ×
NG1	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$	HC6F	1 2	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HD6	4	11 $\frac{3}{8}$ ×
NG2	1 1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5	3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD6F	1 3	10 $\frac{1}{4}$ × 11 $\frac{3}{8}$ ×
NG8	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5F	1 2	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD5	4	11 $\frac{3}{8}$ ×
NG3	1 2	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	HC5E	2 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD5F	1 3	10 $\frac{1}{4}$ × 11 $\frac{3}{8}$ ×
HE6	2	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC1	2 1	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$	HD5E	2 2	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ ×
NE6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	HC2F	2 1 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD1	2 2	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ ×
HE5	2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HC2	2 1 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD2F	2 2 1 3	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ × 10 $\frac{1}{4}$ × 11 $\frac{3}{8}$ ×
NE5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HC4F	4 2 1 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD2	2 2 4	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ × 11 $\frac{3}{8}$ ×
HE1	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HC4	4 2 3	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HD4F	4 4 1 3	10 $\frac{3}{4}$ × 11 $\frac{3}{8}$ × 10 $\frac{1}{4}$ × 11 $\frac{3}{8}$ ×
HES1	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$						
HE2	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
HES2	2 2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						
HE3	2 4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$						

## DOORS

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
HA25	2 9 1	9 $\frac{7}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 15 $\frac{1}{8}$	HA15	1 4 1	9 $\frac{7}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 21 $\frac{3}{8}$
HA2	2 9 1	9 $\frac{7}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 12 $\frac{1}{4}$			

## SIDE LIGHTS

TYPE	NO. OFF	SIZES
HA5		
HA6		



TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
H 4	4 4 4	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$	HD <sub>2</sub> /S	2 1 3 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>1</sub> /S	2 2 1	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 11F	4 4 1 2 3	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $11\frac{3}{8} \times 38\frac{1}{4}$	HD <sub>4</sub> F/S	4 2 1 2 3	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>2</sub> F/S	2 2 1 3 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 11	4 4 4	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 38\frac{1}{4}$	HD <sub>4</sub> /S	4 2 3 3	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>2</sub> /S	2 2 4 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 6/S	3 1	$11\frac{3}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	HD <sub>11</sub> F/S	4 2 1 2 2 1 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $11\frac{3}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>4</sub> F/S	4 4 1 3 3	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 6F/S	1 2 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	HD <sub>11</sub> /S	4 2 3 1 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>4</sub> /S	4 4 4 3	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 5/S	3 1	$11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>6</sub> /S	4 1	$11\frac{3}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	HDV <sub>11</sub> F/S	4 4 1 2 3 1 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $11\frac{3}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 5F/S	1 2 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>6</sub> F/S	1 3 1	$10\frac{1}{4} \times 8\frac{1}{8}$ $11\frac{3}{8} \times 9\frac{1}{4}$ $10\frac{5}{8} \times 9\frac{1}{4}$	HDV <sub>11</sub> /S	4 4 4 1 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 38\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$
H 1/S	2 1 1	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>5</sub> /S	4 1	$11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HL <sub>1</sub>	2	$10\frac{1}{4} \times 16\frac{1}{8}$
H 2F/S	2 1 1 2 2	$10\frac{3}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 17\frac{1}{8}$ $10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$	HDV <sub>5</sub> F/S	1 3 1	$10\frac{1}{4} \times 17\frac{1}{8}$ $11\frac{3}{8} \times 18\frac{1}{4}$ $10\frac{5}{8} \times 18\frac{1}{4}$			

0 ITS

## FANLIGHTS

SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
$11\frac{3}{8} \times 18\frac{1}{4}$	NG <sub>25</sub>	2	$9\frac{3}{4} \times 21\frac{1}{8}$	NG <sub>2</sub>	1 1	$8\frac{5}{8} \times 17\frac{1}{8}$ $9\frac{3}{4} \times 18\frac{1}{4}$
$11\frac{3}{8} \times 9\frac{1}{4}$	NG <sub>25</sub> F	1 1	$8\frac{5}{8} \times 20$ $9\frac{3}{4} \times 21\frac{1}{8}$	NG <sub>5</sub>	1	$9\frac{3}{4} \times 18\frac{1}{4}$
	NG <sub>15</sub>	1	$9\frac{3}{4} \times 28\frac{1}{4}$	NG <sub>1</sub>	1	$8\frac{5}{8} \times 17\frac{1}{8}$
	NG <sub>15</sub> F	1	$8\frac{5}{8} \times 27\frac{1}{8}$	NG <sub>6</sub>	1	$9\frac{3}{4} \times 9\frac{1}{4}$
	NG <sub>8</sub>	2	$9\frac{3}{4} \times 18\frac{1}{4}$			



TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
NG6	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$	NC6	1	34 $\frac{1}{2}$ × 9 $\frac{1}{4}$	ND6	1	46 $\frac{1}{8}$ × 9 $\frac{1}{4}$
NG5	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 9 $\frac{1}{4}$	ND6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 9 $\frac{1}{4}$
NG1	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$	NC5	1	34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND5	1	46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NG2	1 1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NG8	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC5E	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	ND5E	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$
NG3	1 2	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$ 9 $\frac{3}{4}$ × 18 $\frac{1}{4}$	NC1	1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$	ND1	1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$
NE6	1	22 $\frac{7}{8}$ × 9 $\frac{1}{4}$	NC2F	1 1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND2F	1 1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NE6F	1 1	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{1}{4}$	NC2	1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND2	1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NE5	1	22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	NC4F	2 1 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$	ND4F	2 1 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$
NE5F	1 1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	NC4	2 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 18 $\frac{1}{4}$	ND4	2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 18 $\frac{1}{4}$
NE1	1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$	NC11F	2 1 1 2	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 38 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$	ND11F	2 1 2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 10 $\frac{1}{4}$ × 17 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 9 $\frac{3}{4}$ 34 $\frac{1}{2}$ × 38 $\frac{1}{4}$
NES1	1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$	NC11	2 1	33 $\frac{1}{2}$ × 17 $\frac{1}{8}$ 34 $\frac{1}{2}$ × 38 $\frac{1}{4}$	ND11	2 1	45 $\frac{1}{8}$ × 17 $\frac{1}{8}$ 46 $\frac{1}{8}$ × 38 $\frac{1}{4}$
NE2	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NES2	1 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NE3	1 2	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 18 $\frac{1}{4}$						
NE11	2 1	21 $\frac{7}{8}$ × 17 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 38 $\frac{1}{4}$						

DOORS

TYPE	NO. OFF	SIZES
NA25	2 2 1 1	33 $\frac{1}{8}$ × 19 $\frac{1}{8}$ 22 $\frac{7}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 19 $\frac{1}{8}$ 11 $\frac{3}{8}$ × 15 $\frac{1}{8}$

TYPE	NO. OFF	SIZES
NA2	2 2 1 1	33 $\frac{1}{8}$ × 16 $\frac{1}{4}$ 22 $\frac{7}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 16 $\frac{1}{4}$ 11 $\frac{3}{8}$ × 12 $\frac{1}{4}$
NA15	1 1 1	33 $\frac{1}{8}$ × 25 $\frac{3}{8}$ 22 $\frac{7}{8}$ × 25 $\frac{3}{8}$ 11 $\frac{3}{8}$ × 21 $\frac{3}{8}$

SIDING

TYPE
NA5
NA6



# WINDOWS

GLASS SIZES  
(CLEARANCE ALLOWED)

13

TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES	TYPE	NO. OFF	SIZES
HD4	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HD2/S	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HDV1/S	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
	4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		1	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	4	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD11F				2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV2F/S	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HD4F/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$
	1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$		1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$		3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
	2	11 $\frac{3}{8}$ × 9 $\frac{3}{4}$		2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
HD11				3	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV2/S	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HD4/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		4	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
HD6/S				3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
	4	11 $\frac{3}{8}$ × 38 $\frac{1}{4}$		3	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV4F/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
HD6F/S			HD11F/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$		4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	3	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$
HD5/S				1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$		3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
	1	10 $\frac{5}{8}$ × 9 $\frac{1}{4}$		2	11 $\frac{3}{8}$ × 9 $\frac{3}{4}$		3	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
	2	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$		2	11 $\frac{3}{8}$ × 38 $\frac{1}{4}$	HDV4/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
HD5F/S				1	10 $\frac{5}{8}$ × 38 $\frac{1}{4}$		4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	1	10 $\frac{5}{8}$ × 9 $\frac{1}{4}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		4	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
HD1/S			HD11/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$		3	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
	3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		2	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$	HDV11F/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
	1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		3	11 $\frac{3}{8}$ × 38 $\frac{1}{4}$		4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
HD2F/S				1	10 $\frac{5}{8}$ × 38 $\frac{1}{4}$		1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$
	2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		2	11 $\frac{3}{8}$ × 9 $\frac{3}{4}$
	1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV6/S				3	11 $\frac{3}{8}$ × 38 $\frac{1}{4}$
HD1/S				4	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$		1	10 $\frac{5}{8}$ × 38 $\frac{1}{4}$
	2	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$	HDV6F/S	1	10 $\frac{5}{8}$ × 9 $\frac{1}{4}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
	1	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$		3	10 $\frac{1}{4}$ × 8 $\frac{1}{8}$	HDV11/S	4	10 $\frac{3}{4}$ × 17 $\frac{1}{8}$
HD2F/S				1	11 $\frac{3}{8}$ × 9 $\frac{1}{4}$		4	11 $\frac{3}{8}$ × 17 $\frac{1}{8}$
	1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$	HDV5/S	4	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		4	11 $\frac{3}{8}$ × 38 $\frac{1}{4}$
	1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		1	10 $\frac{5}{8}$ × 38 $\frac{1}{4}$
	2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HDV5F/S	1	10 $\frac{1}{4}$ × 17 $\frac{1}{8}$		2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$
	2	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$		3	11 $\frac{3}{8}$ × 18 $\frac{1}{4}$	HL1	2	10 $\frac{1}{4}$ × 16 $\frac{1}{8}$
	2	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$		1	10 $\frac{5}{8}$ × 18 $\frac{1}{4}$			

## GHTS

SIZES
11 $\frac{3}{8}$ × 18 $\frac{1}{4}$
11 $\frac{3}{8}$ × 9 $\frac{1}{4}$

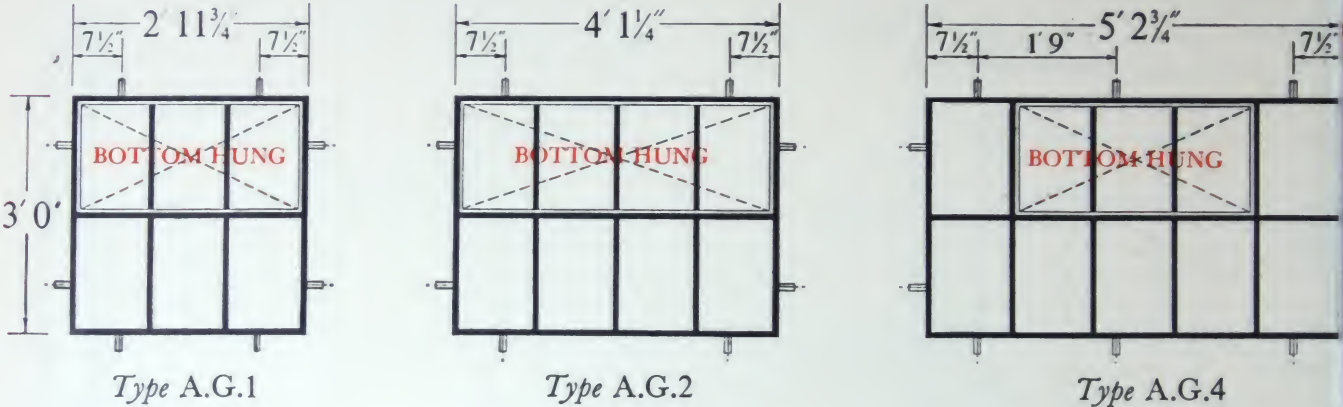
## FANLIGHTS

TYPE	NO. OFF	SIZES
NG25	2	9 $\frac{3}{4}$ × 21 $\frac{1}{8}$
NG25F	1	8 $\frac{5}{8}$ × 20
	1	9 $\frac{3}{4}$ × 21 $\frac{1}{8}$
NG15	1	9 $\frac{3}{4}$ × 28 $\frac{1}{4}$
NG15F	1	8 $\frac{5}{8}$ × 27 $\frac{1}{8}$
NG8	2	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$

TYPE	NO. OFF	SIZES
NG2	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$
	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$
NG5	1	9 $\frac{3}{4}$ × 18 $\frac{1}{4}$
NG1	1	8 $\frac{5}{8}$ × 17 $\frac{1}{8}$
NG6	1	9 $\frac{3}{4}$ × 9 $\frac{1}{4}$



HOPE'S *Standard Steel Windows for  
Cowhouses & Other Agricultural Building.*



*Centres of holes are given for fixing to concrete  
Slotted lugs, adjustable to brick courses, are supplied unless otherwise ordered*

HOPE'S Agricultural Windows are made in three Standard Types and Sizes as illustrated above. They are prepared for inside putty glazing with a flanged frame bar all round.

Ventilators are Bottom Hung on corner hinges and are fitted with steel side cheeks with a quick-release lever to enable the ventilator to be folded right down for maximum ventilation or cleaning.

Spring Catches for hand or pole operation are fitted to all ventilators. Holes are drilled for glazing and spring wire glazing clips will be supplied when ordered. Special metal sash putty should be used.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Handling, fixing and glazing instructions are sent with each consignment.

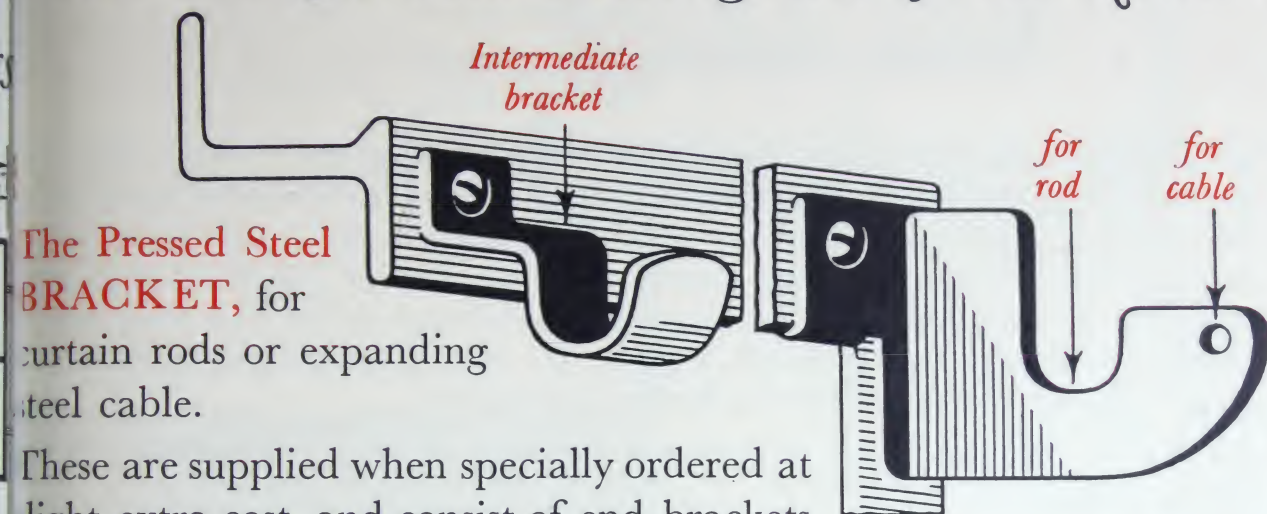
**GLASS SIZES (CLEARANCE ALLOWED)**

TYPE	NO. OFF	SIZES
A.G.1	2	15 1/2" × 10 1/2"
	1	15 1/2" × 11 1/8"
	3	17 1/8" × 11 1/8"
A.G.2	2	15 1/2" × 11"
	2	15 1/2" × 11 1/2"
	4	17 1/8" × 11 1/2"

TYPE	NO. OFF	SIZES
A.G.4	3	17 1/8" × 11"
	2	17 1/8" × 12 7/8"
	2	16 5/8" × 12 7/8"
	2	15 1/2" × 10 1/2"
	1	15 1/2" × 11"

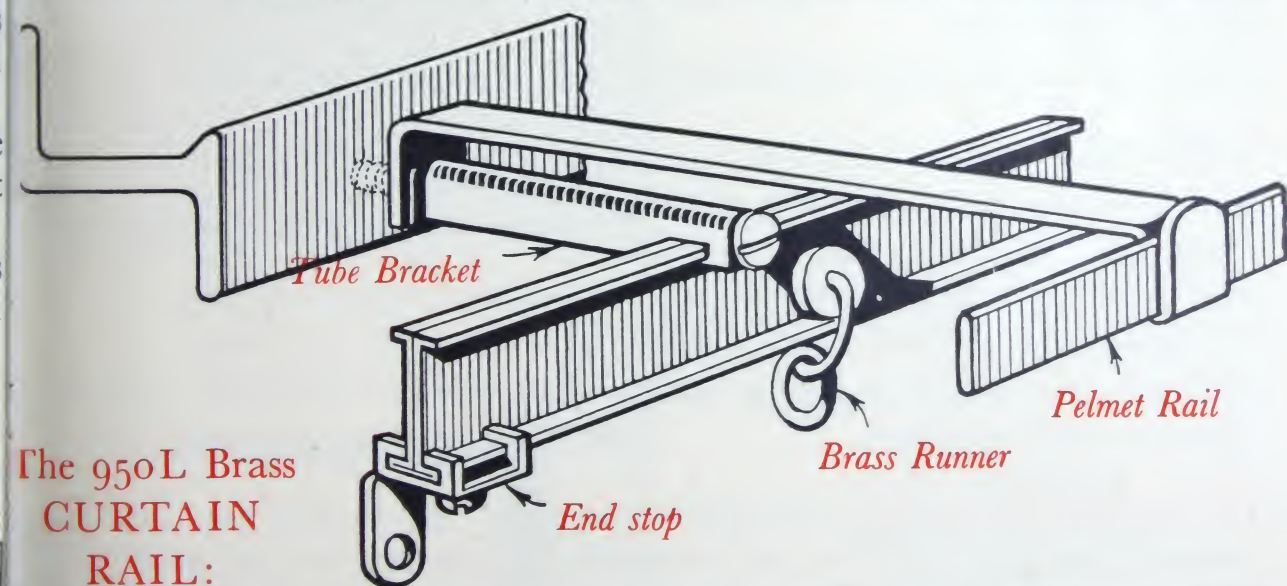


HOPE'S *Curtain Fittings* are of two kinds:



The Pressed Steel  
**BRACKET**, for  
curtain rods or expanding  
steel cable.

These are supplied when specially ordered at slight extra cost, and consist of end brackets (in pairs) with intermediate brackets for windows over 1' 8" wide. They are rustproofed and can be fixed to the windows in the manner shown above, with  $\frac{3}{16}$ "  $\times$   $\frac{3}{16}$ " round head whitworth screws.



The 950L Brass  
**CURTAIN  
RAIL:**

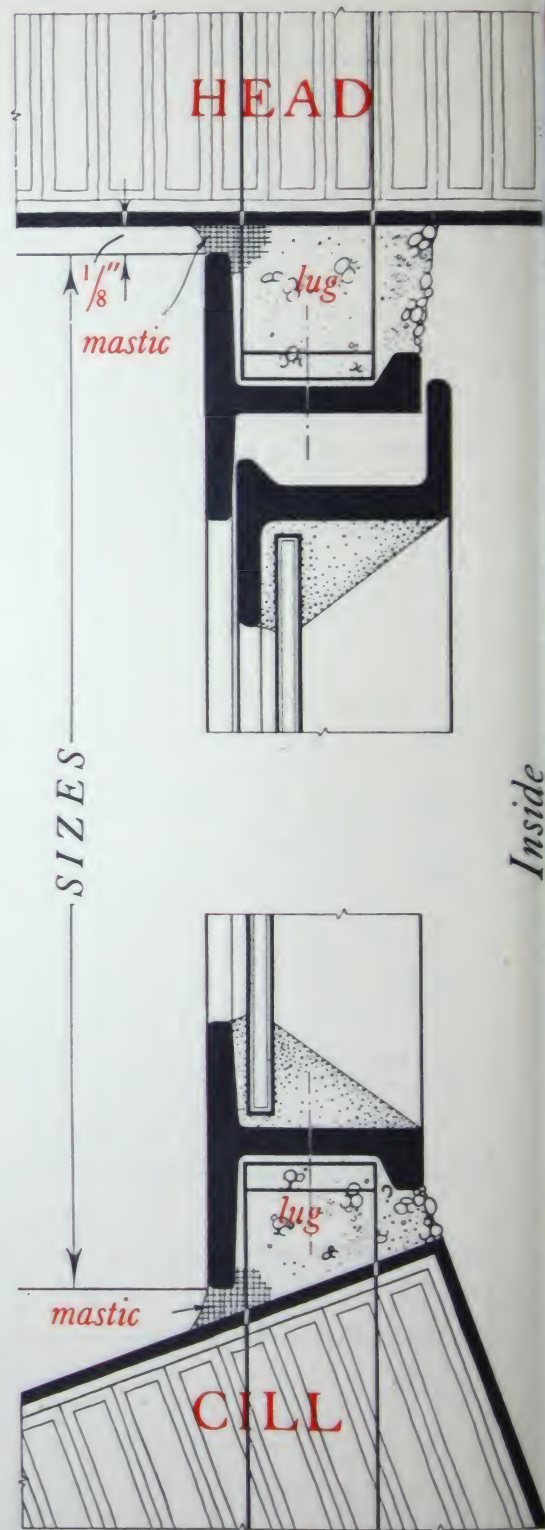
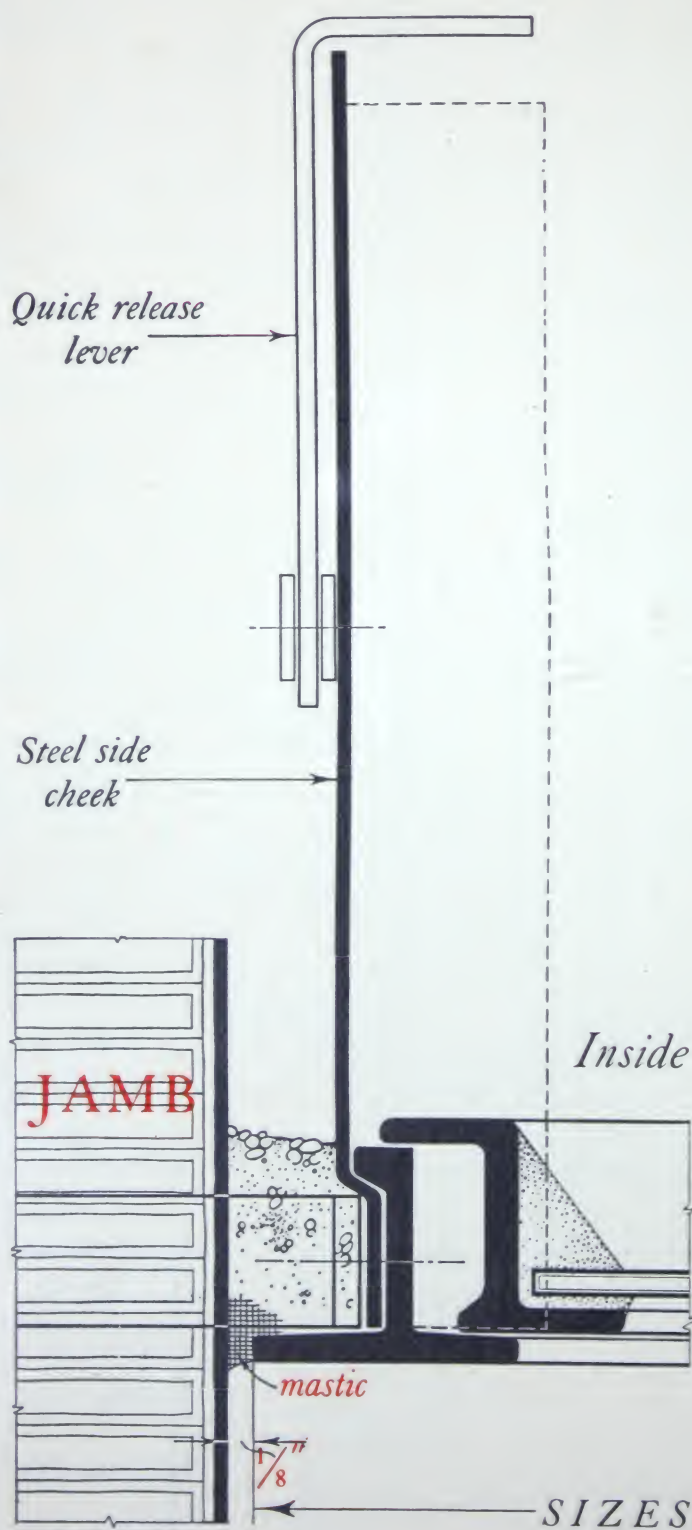
Illustrated above can be obtained from most good ironmongers or builders' merchants complete with special fixing screws and tube brackets for use with Hope's Windows. Pelmet rails and brackets can also be provided where specially ordered.

This curtain rail is easily fixed to the tapped holes in Hope's Windows, and can be obtained either in straight lengths or to fit round bays. In case of difficulty in obtaining supplies please apply to us.



# tural Windows • Galvanized

## FULL SIZE DETAILS *Showing Fixing to Brickwork*

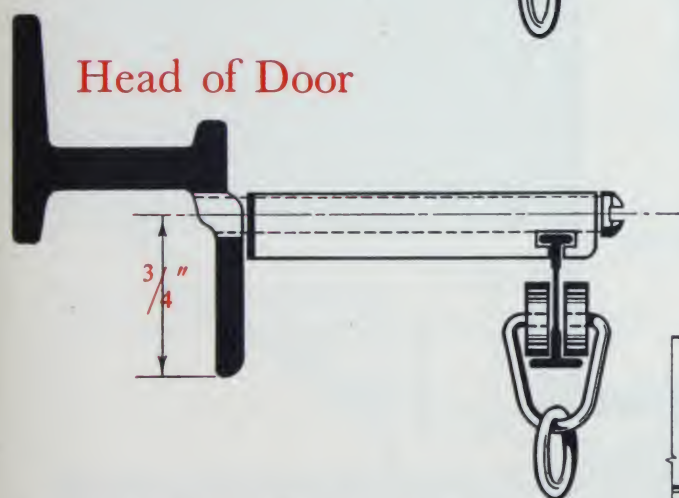
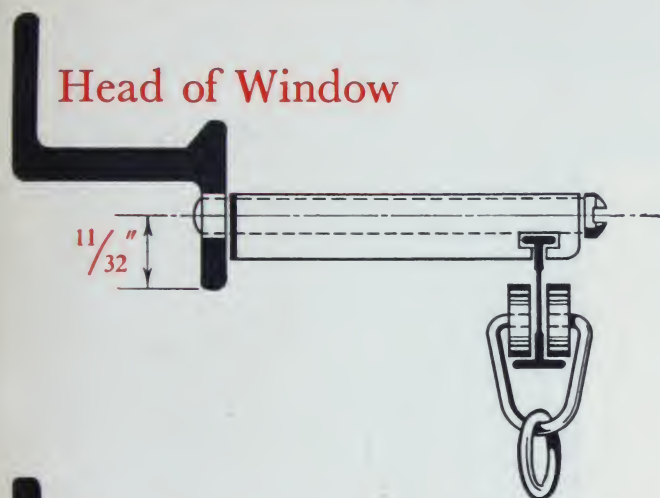




# HOPE'S CURTAINS

All HOPE'S *Standard Windows & Doors* are prepared for curtain brackets before despatch.

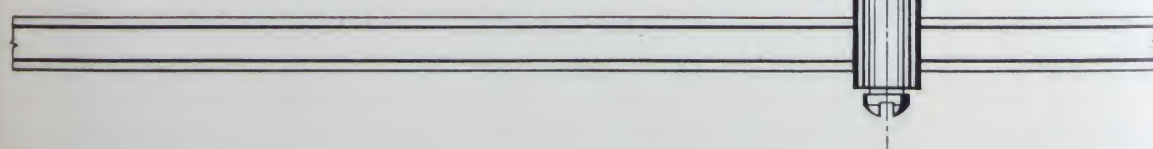
Holes are drilled and tapped in the head of the frame at centres given below, and are suitable for most types of curtain fittings.



Standard Widths of Windows	No. of curtain brackets to each Window
11"	2
1' 8"	2
2' 6" (door)	3
3' 3 1/4"	3
3' 9" (door)	3
4' 10 1/2"	4
6' 6 1/2"	5

Full Size Details

Extra holes are drilled (approx. 1' 6" apart) in windows over 1' 8" wide. (See table above.)



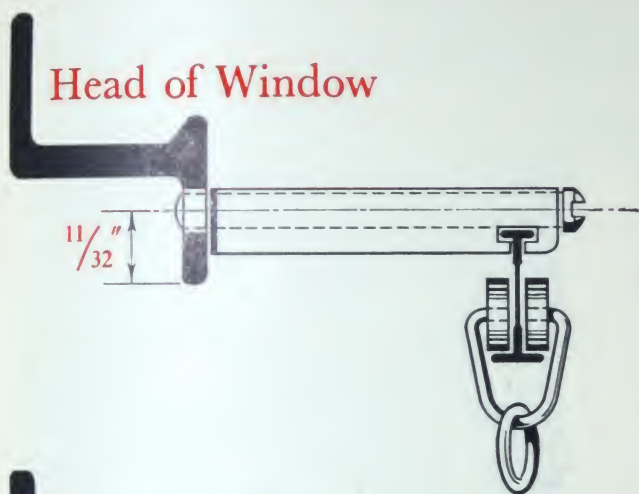


# HOPE'S CURTAIN

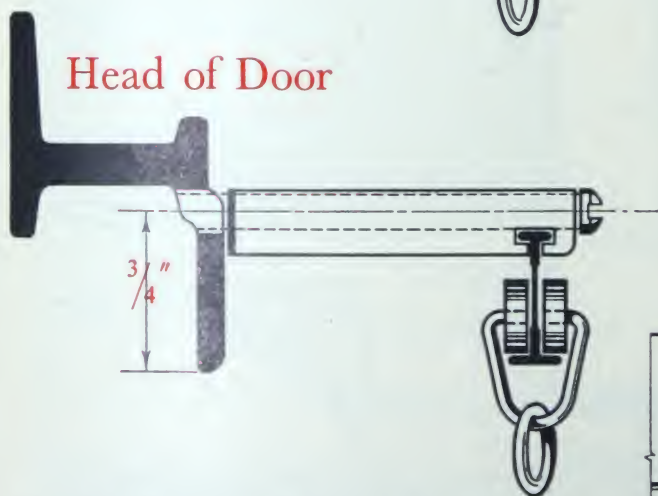
All HOPE'S *Standard Windows & Doors* are prepared for curtain brackets before despatch.

Holes are drilled and tapped in the head of the frame at centres given below, and are suitable for most types of curtain fittings.

Head of Window

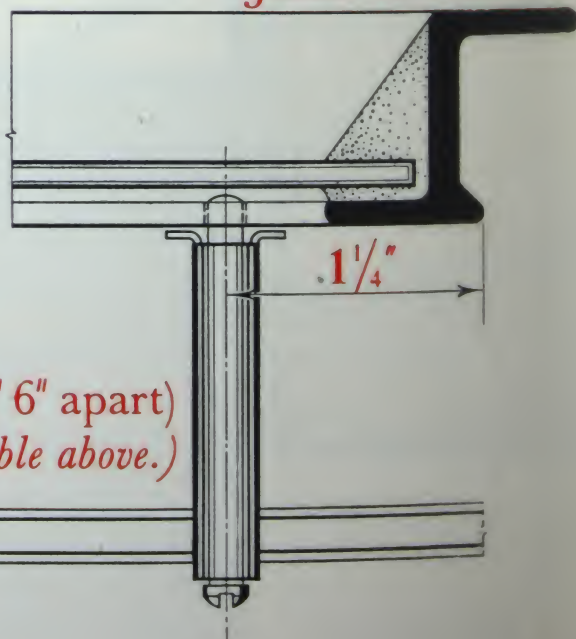


Head of Door



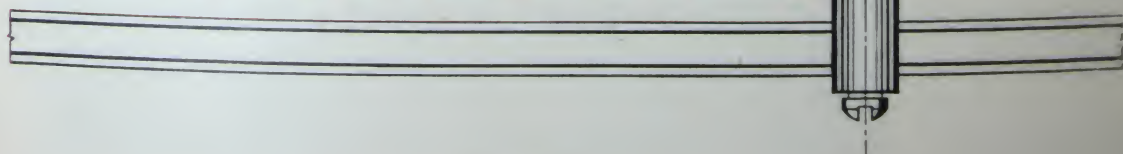
Standard Widths of Windows	No. of curtain brackets to each Window
11"	2
1' 8"	2
2' 6" ( <i>door</i> )	3
3' 3 $\frac{1}{4}$ "	3
3' 9" ( <i>door</i> )	3
4' 10 $\frac{1}{2}$ "	4
6' 6 $\frac{1}{2}$ "	5

Jamb of Window



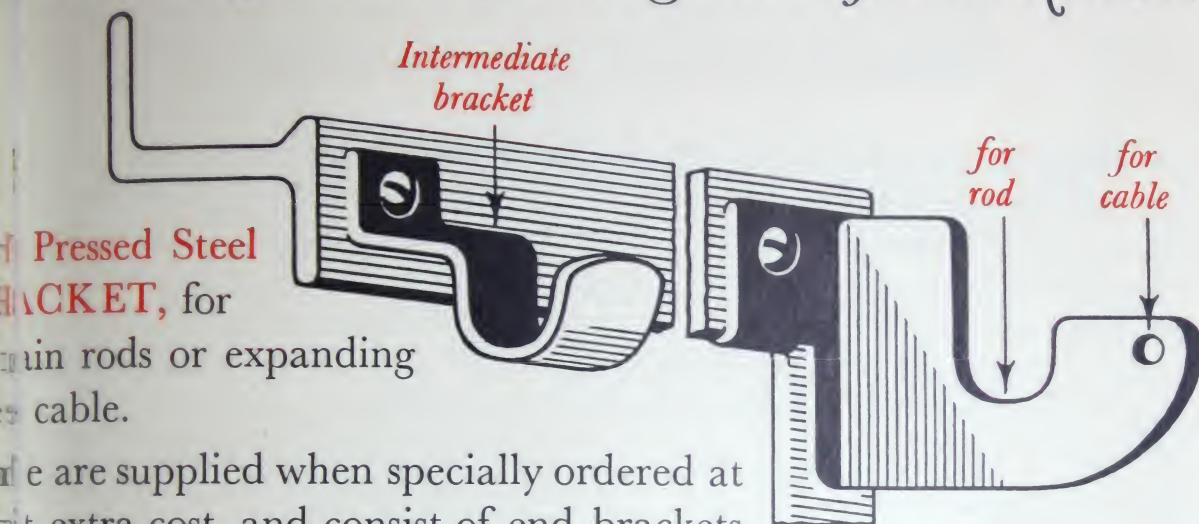
## Full Size Details

Extra holes are drilled (approx. 1' 6" apart) in windows over 1' 8" wide. (*See table above.*)



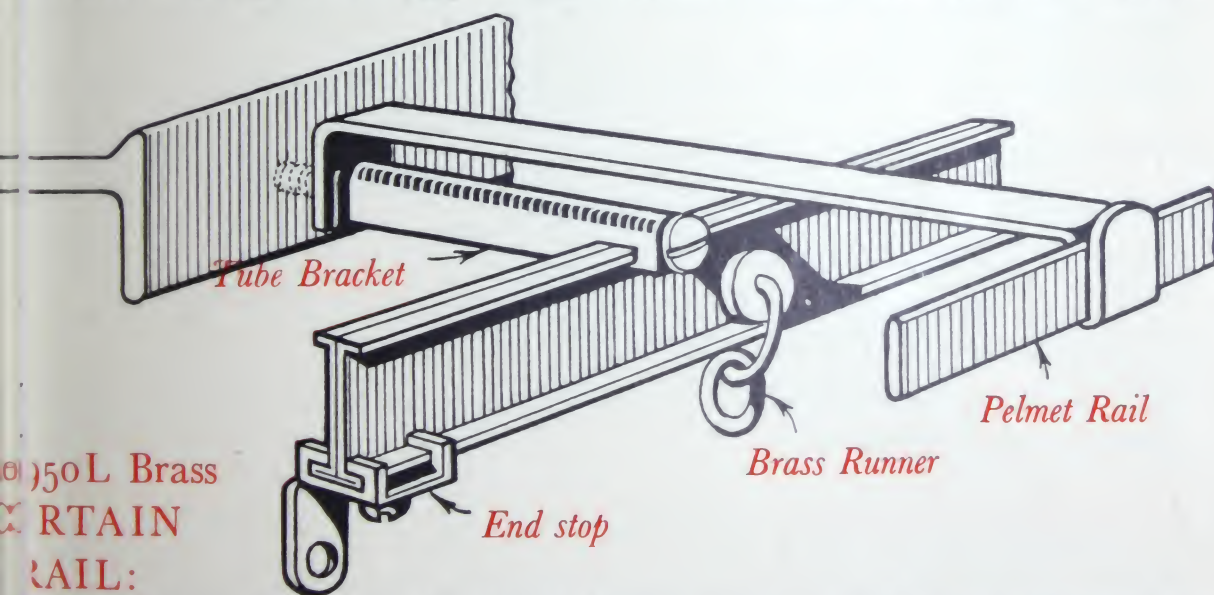


HOPE'S *Curtain Fittings* are of two kinds:



Pressed Steel  
BRACKET, for  
curtain rods or expanding  
cable.

are supplied when specially ordered at  
at extra cost, and consist of end brackets  
(pairs) with intermediate brackets for windows over 1' 8" wide.  
are rustproofed and can be fixed to the windows in the man-  
shown above, with  $\frac{3}{16}$ "  $\times$   $\frac{3}{16}$ " round head whitworth screws.



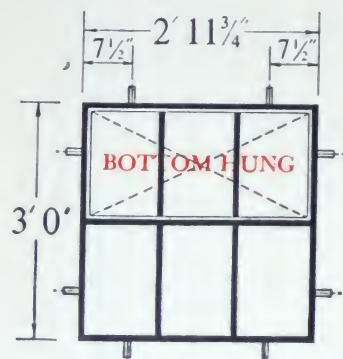
50L Brass  
CURTAIN  
RAIL:

ated above can be obtained from most good ironmongers or  
llers' merchants complete with special fixing screws and tube  
ets for use with Hope's Windows. Pelmet rails and brackets  
also be provided where specially ordered.

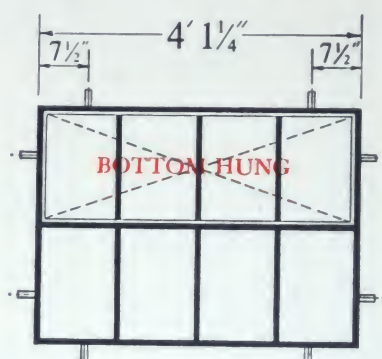
curtain rail is easily fixed to the tapped holes in Hope's Windows,  
can be obtained either in straight lengths or to fit round bays.  
of difficulty in obtaining supplies please apply to us.



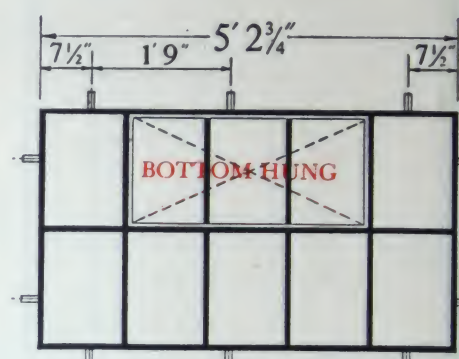
## HOPE'S Standard Steel Windows for Cowhouses & Other Agricultural Buildings



Type A.G.1



Type A.G.2



Type A.G.4

*Centres of holes are given for fixing to concrete  
Slotted lugs, adjustable to brick courses, are supplied unless otherwise ordered*

HOPE'S Agricultural Windows are made in three Standard Types and Sizes as illustrated above. They are prepared for inside putty glazing with a flanged frame bar all round.

Ventilators are Bottom Hung on corner hinges and are fitted with steel side cheeks with a quick-release lever to enable the ventilator to be folded right down for maximum ventilation or cleaning.

Spring Catches for hand or pole operation are fitted to all ventilators. Holes are drilled for glazing and spring wire glazing clips will be supplied when ordered. Special metal sash putty should be used.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Handling, fixing and glazing instructions are sent with each consignment.

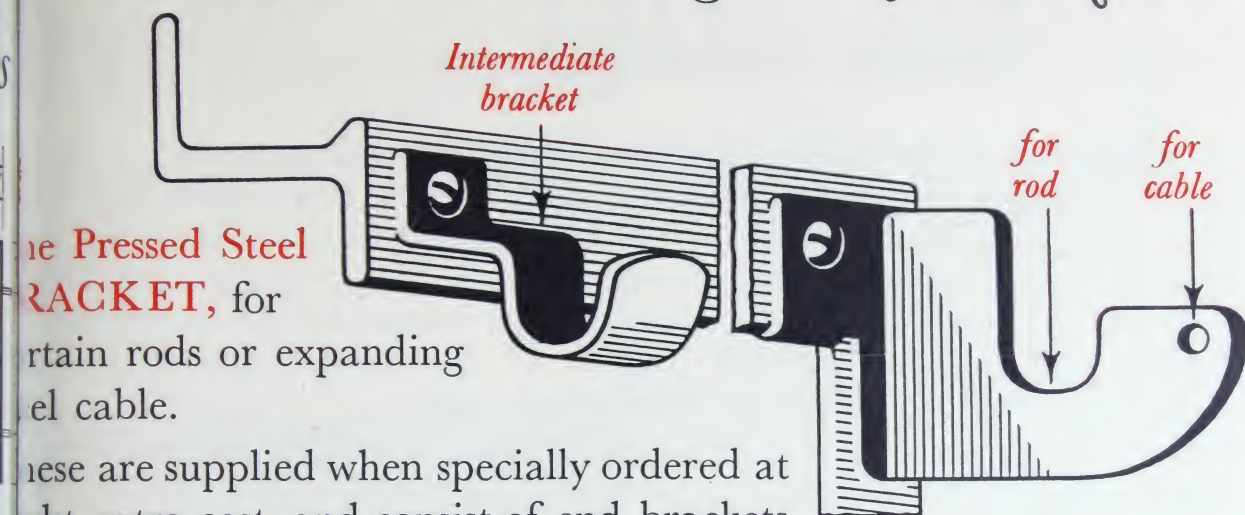
### GLASS SIZES (CLEARANCE ALLOWED)

TYPE	NO. OFF	SIZES
A.G.1	2	15½" × 10½"
	1	15½" × 11⅛"
	3	17⅛" × 11⅛"
A.G.2	2	15½" × 11"
	2	15½" × 11½"
	4	17⅛" × 11½"

TYPE	NO. OFF	SIZES
A.G.4	3	17⅛" × 11"
	2	17⅛" × 12⅞"
	2	16⅝" × 12⅞"
	2	15½" × 10½"
	1	15½" × 11"

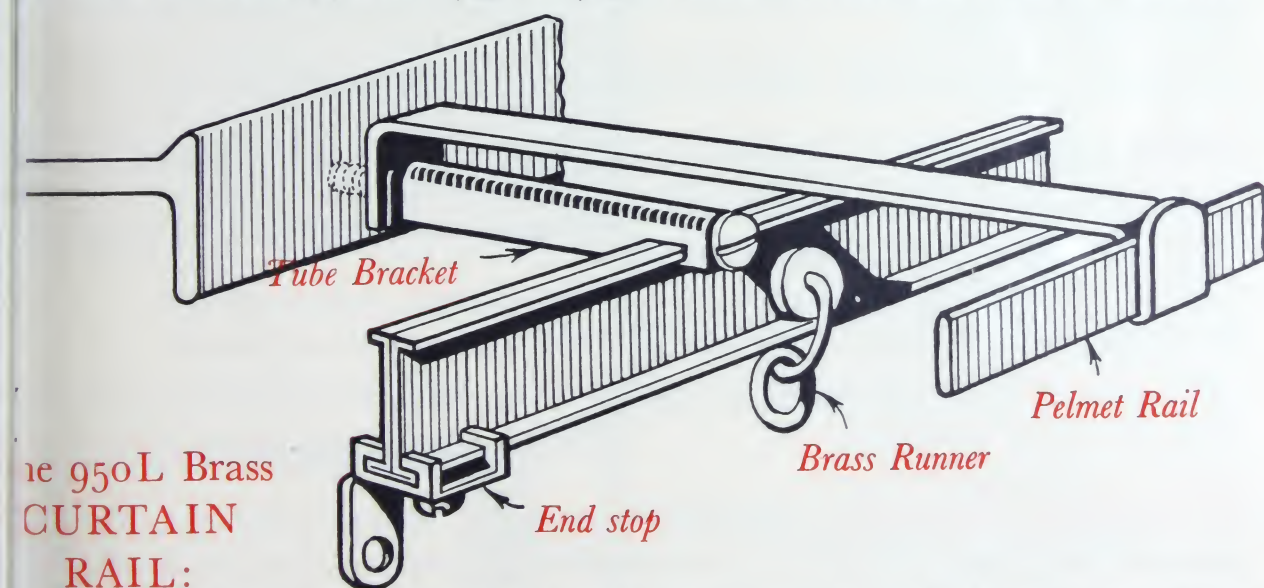


HOPE'S *Curtain Fittings are of two kinds:*



the Pressed Steel  
**RACKET**, for  
curtain rods or expanding  
steel cable.

These are supplied when specially ordered at  
slight extra cost, and consist of end brackets  
(in pairs) with intermediate brackets for windows over 1' 8" wide.  
They are rustproofed and can be fixed to the windows in the man-  
ner shown above, with  $\frac{3}{16}$ "  $\times$   $\frac{3}{16}$ " round head whitworth screws.



the 950L Brass  
**CURTAIN  
RAIL:**

As illustrated above can be obtained from most good ironmongers or  
builders' merchants complete with special fixing screws and tube  
brackets for use with Hope's Windows. Pelmet rails and brackets  
can also be provided where specially ordered.

This curtain rail is easily fixed to the tapped holes in Hope's Windows,  
and can be obtained either in straight lengths or to fit round bays.  
In case of difficulty in obtaining supplies please apply to us.



## HOPE'S *Standard Steel Sub-frame.* for 11" walls with 2½" cavity (Patent No. 429359/39)

are made for all types of Standard Windows listed on pages 2 and 3. They are specially designed for building into 11" walls with 2½" cavity, and by their use the cavity is sealed all round the window opening without the use of slats, expanded metal or other damp-course materials. Perfect insulation is assured, no damp can reach inside of building. The Sub-frame serves as a template for window openings and provides support for flat brick arches; frames over 3' 3¼" wide require arch bars or other reinforcement.

HOPE'S Standard Steel Sub-frames will not shrink, warp, twist or rattle. Plaster and window boards are accommodated without loose beads to cover shrinkage. No fixing lugs or horns—no cutting of brickwork.

**Construction** HOPE'S 'Cavity' Sub-frames are pressed from 16 g. steel and welded at all four corners. Fixing holes are provided to correspond with those in Standard Metal Windows, and all sub-frames are prepared for sub-cills and window boards.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

**Cills** For straight brickwork openings we supply a Steel Sub-cill, as illustrated full size on the opposite page.

Standard Sub-cills for 'Cavity' Sub-frames are pressed from 10 g. steel; where over 3' 3¼" wide they are provided with a central supporting lug.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Cills may also be constructed in tiles or other builders' materials, as shown in half size detail opposite.

**Window Boards** HOPE'S Standard Metal Window Boards are pressed from 16 g. steel, but can be supplied in any non-ferrous metal. Sliding adjustable lugs are provided, and all window boards are prepared for screwing to steel sub-frames.

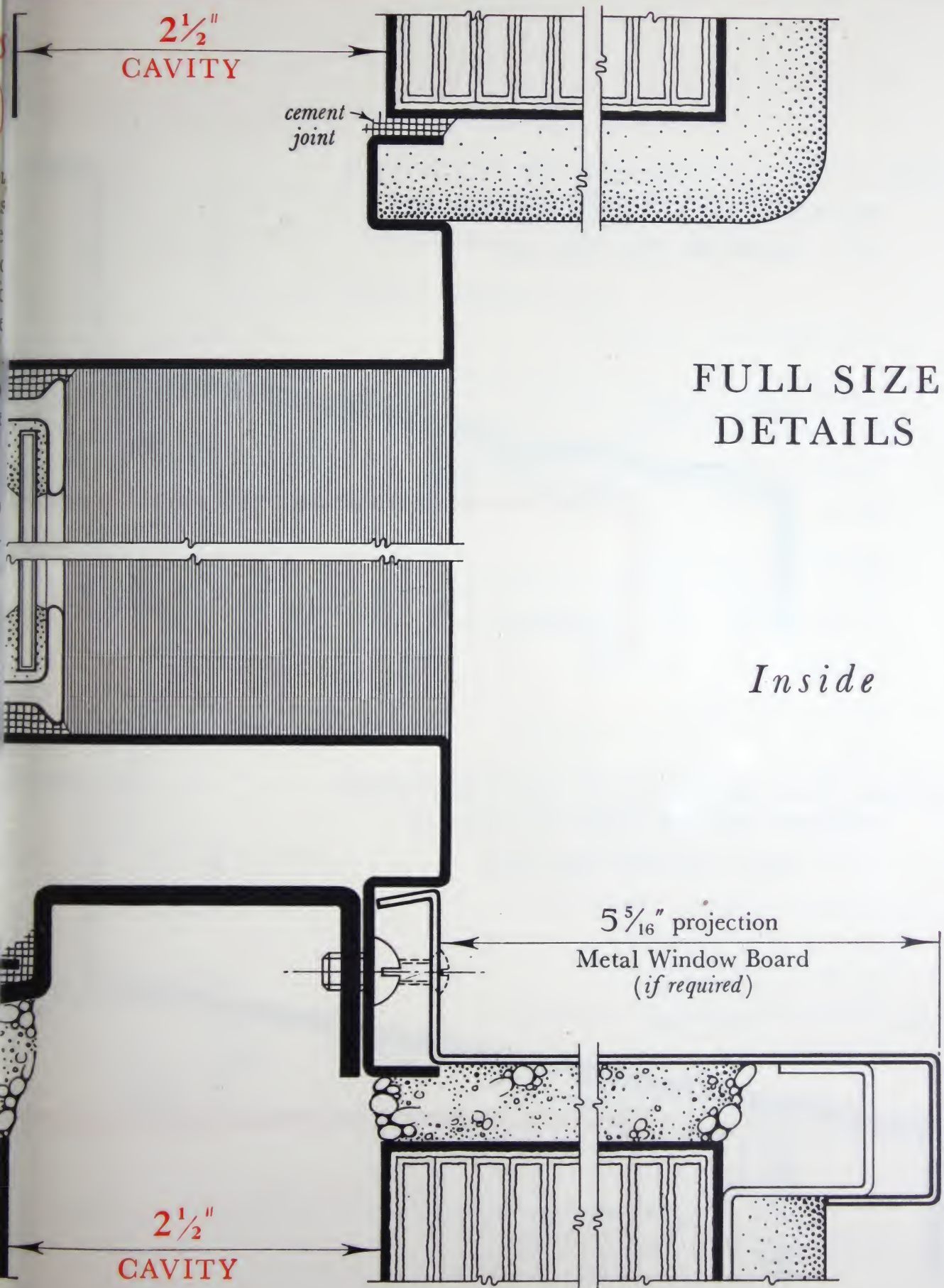
FINISH: painted one coat red oxide paint before despatch.

**When Ordering** 'Cavity' Sub-frames it is only necessary to include them with the Standard Window as required, thus:

6 (six) ND 11 F with 'Cavity' Sub-frames.

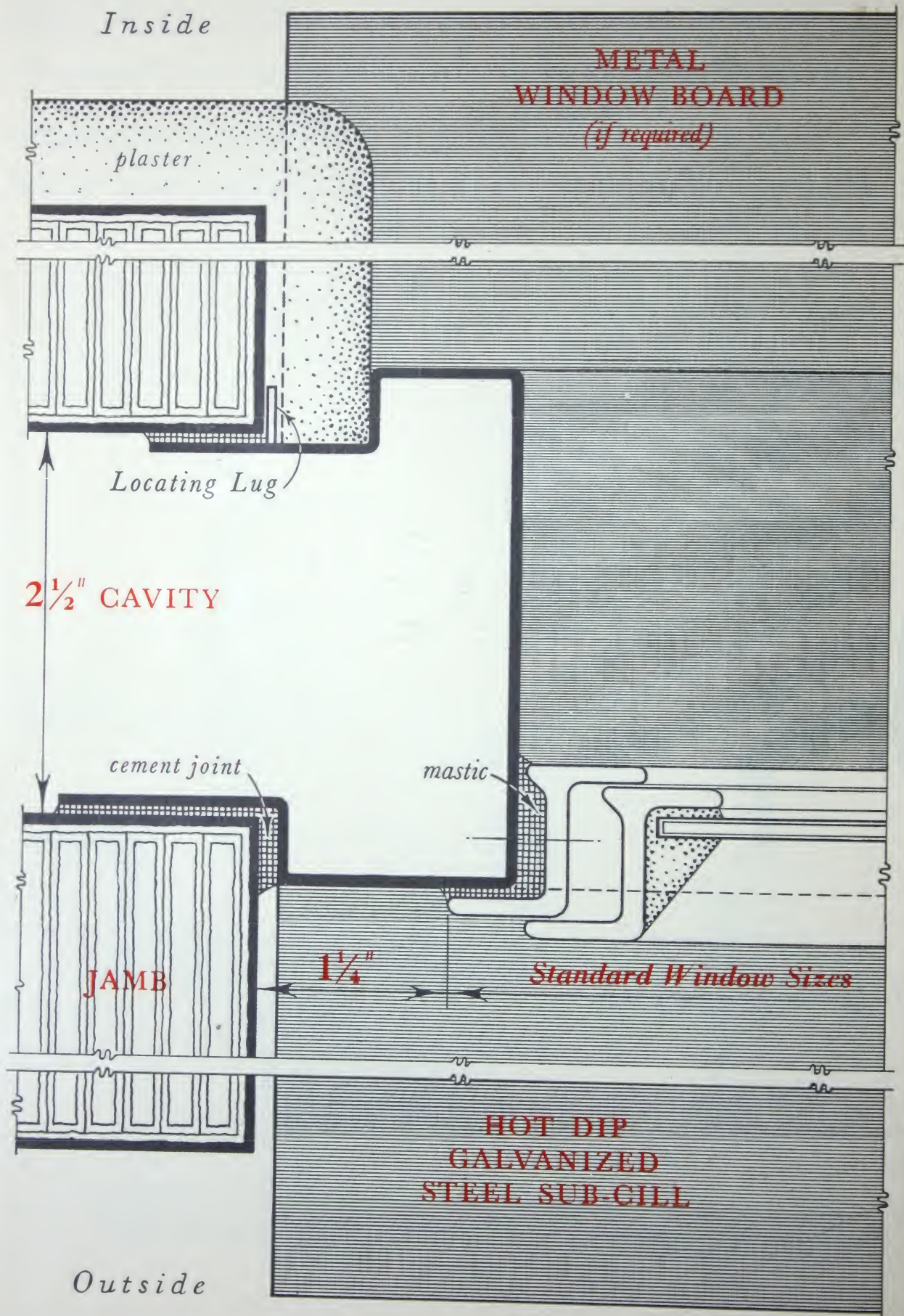
STATE whether Standard Steel Sub-cills and Metal Window Boards are also required.





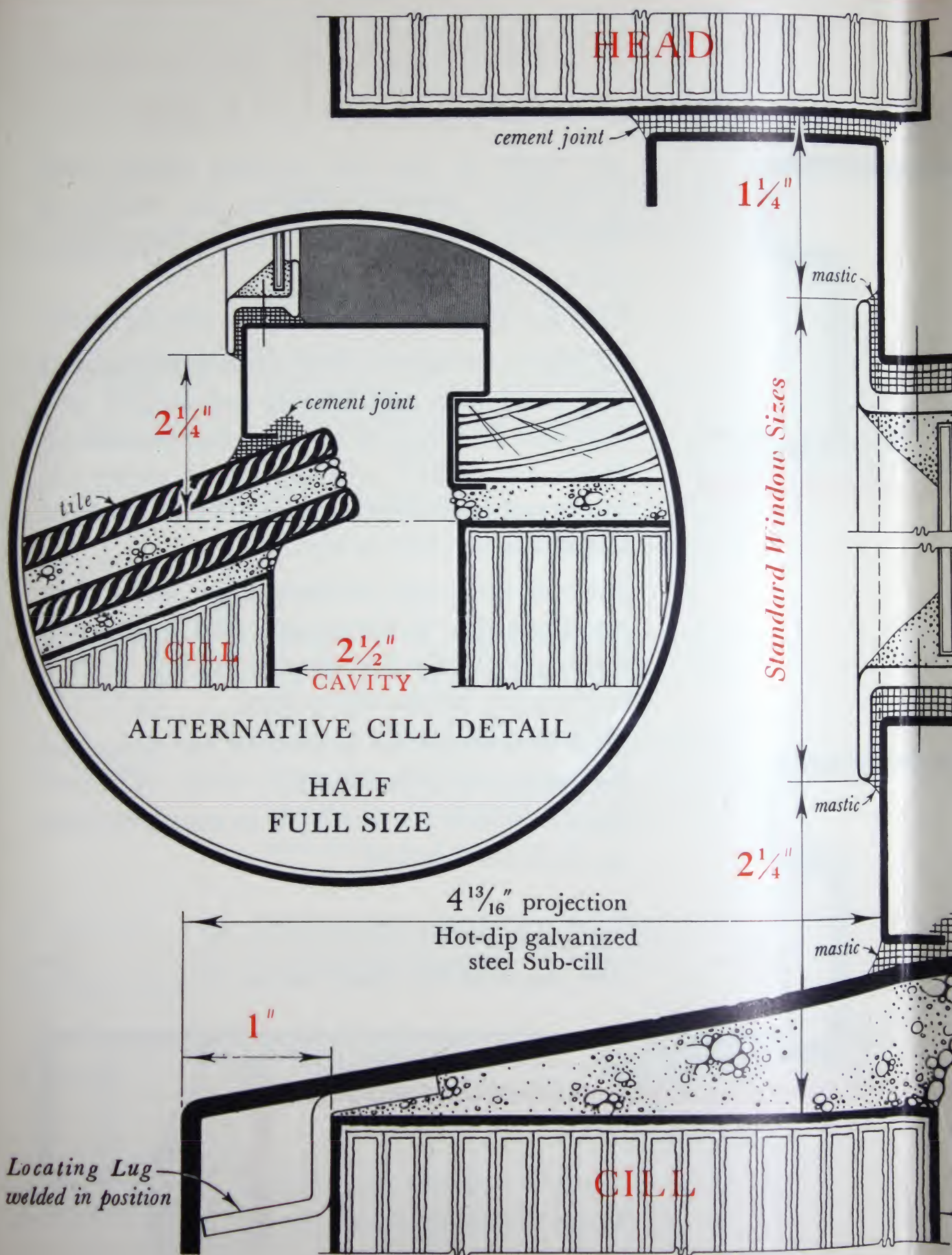


# FRAMES (Patent No. 429359/33)



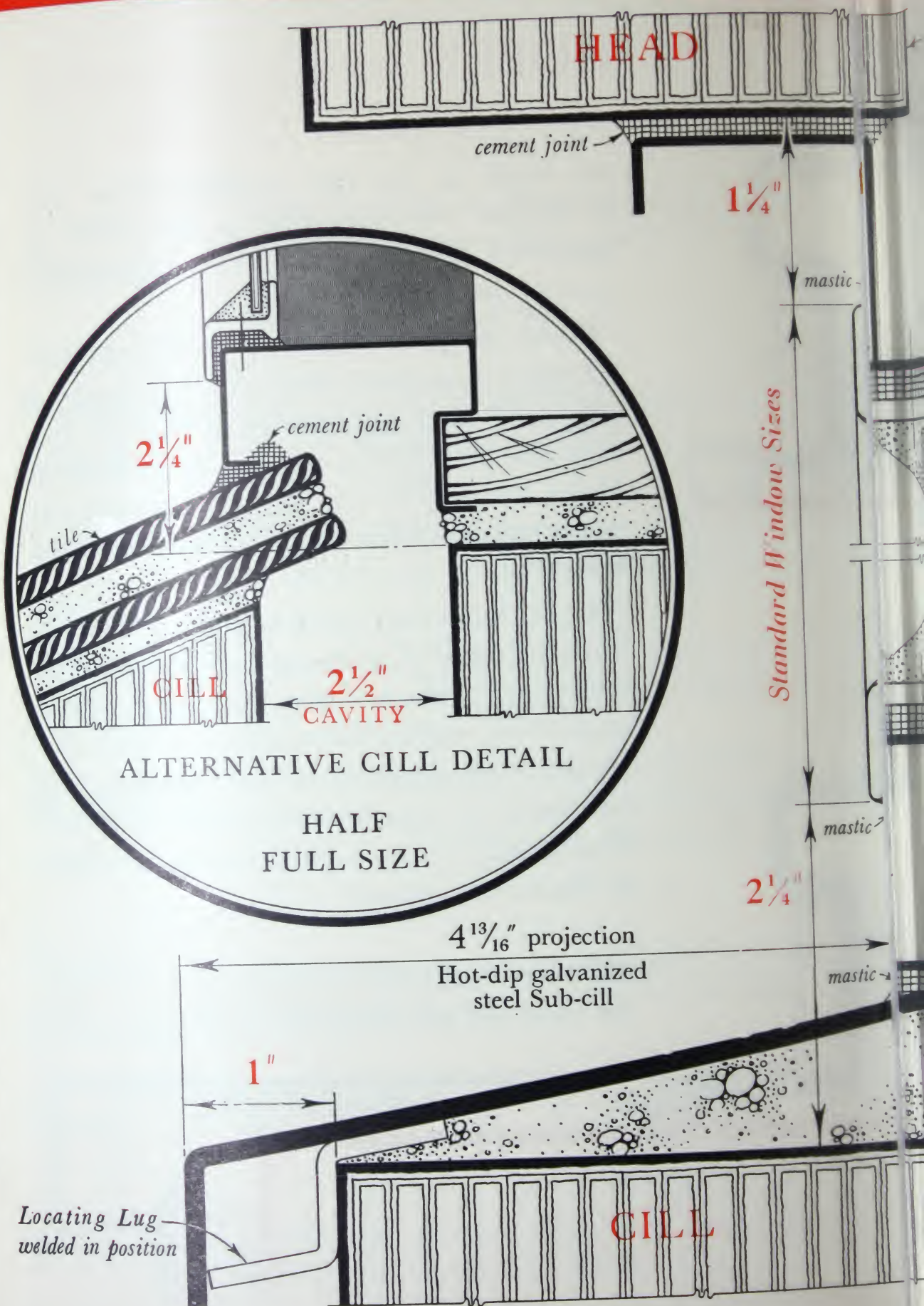


# HOPE'S 'CAVITY' SUB-FR

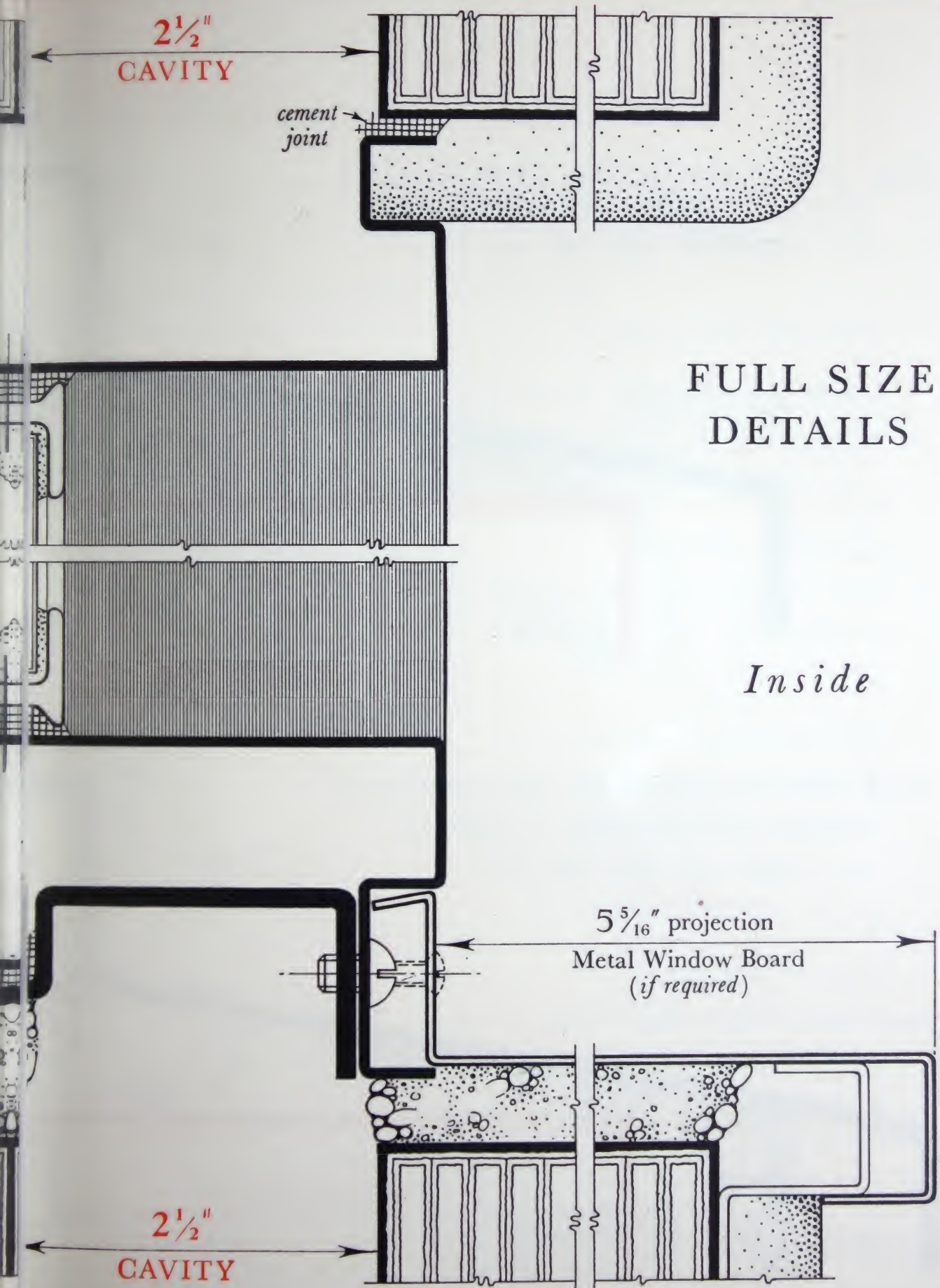




# HOPE'S 'CAVITY' SUB-FRAME









## HOPE'S *Standard Steel Sub-frame* for 11" walls with 2½" cavity (Patent No. 429359/39)

are made for all types of Standard Windows listed on pages 2 and 3. They are specially designed for building into 11" walls with 2½" cavity, and by their use the cavity is sealed all round the window opening without the use of slates, expanded metal or other damp-course materials. Perfect insulation is assured, no damp can reach inside of building. The Sub-frame serves as a template for window openings and provides support for flat brick arches; frames over 3' 3¼" wide require arch bars or other reinforcement.

HOPE'S Standard Steel Sub-frames will not shrink, warp, twist or rattle. Plaster and window boards are accommodated without loose beads to cover shrinkage. No fixing lugs or horns—no cutting of brickwork.

**Construction** HOPE'S 'Cavity' Sub-frames are pressed from 16 g. steel and welded at all four corners. Fixing holes are provided to correspond with those in Standard Metal Windows, and all sub-frames are prepared for sub-cills and window boards.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

**Cills** For straight brickwork openings we supply a Steel Sub-cill, as illustrated full size on the opposite page.

Standard Sub-cills for 'Cavity' Sub-frames are pressed from 10 g. steel; where over 3' 3¼" wide they are provided with a central supporting lug.

FINISH: HOT-DIP GALVANIZED, delivered unpainted.

Cills may also be constructed in tiles or other builders' materials, as shown in half size detail opposite.

**Window Boards** HOPE'S Standard Metal Window Boards are pressed from 16 g. steel, but can be supplied in any non-ferrous metal. Sliding adjustable lugs are provided, and all window boards are prepared for screwing to steel sub-frames.

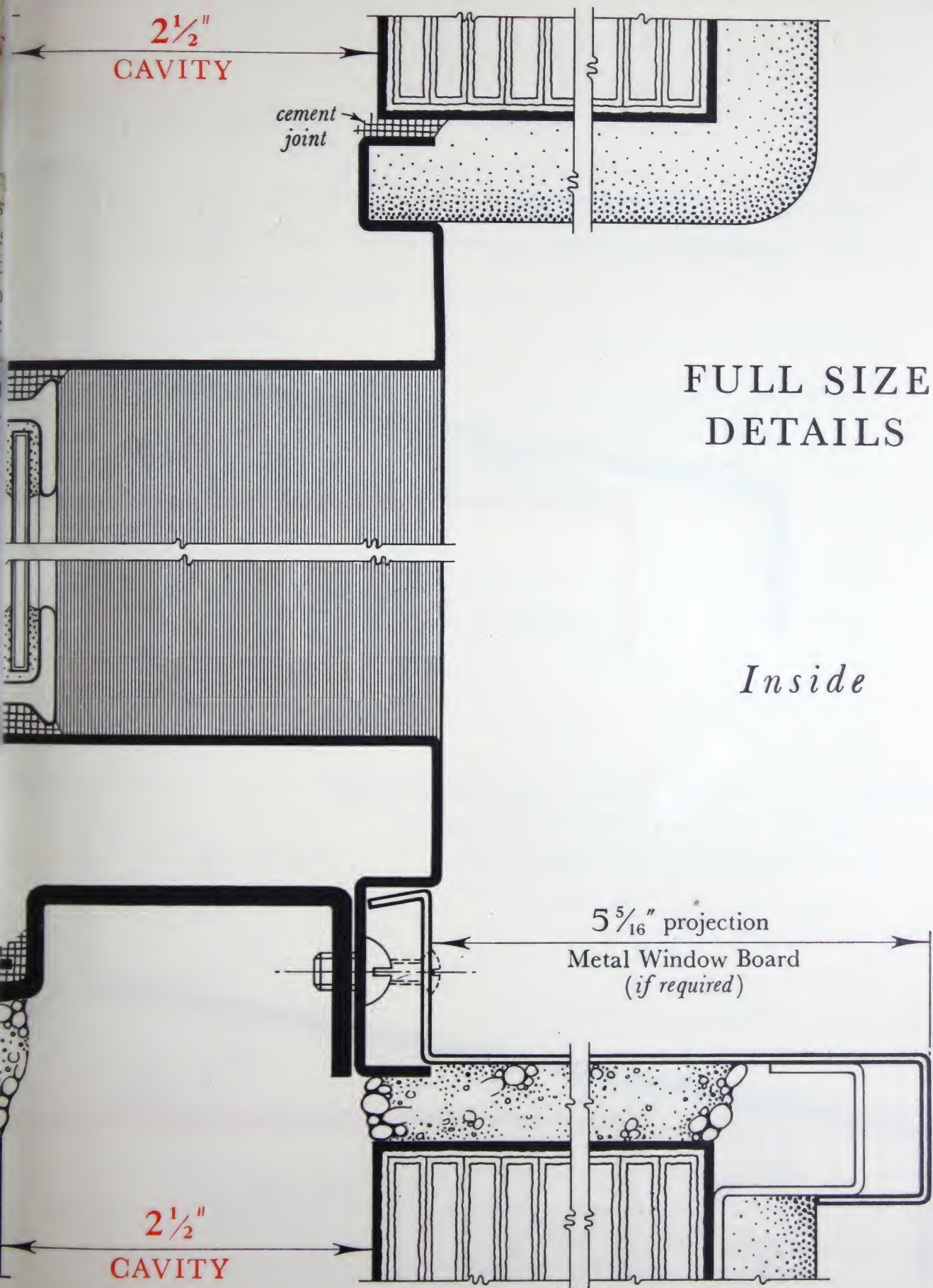
FINISH: painted one coat red oxide paint before despatch.

**When Ordering** 'Cavity' Sub-frames it is only necessary to include them with the Standard Window as required, thus:

6 (six) ND 11 F with 'Cavity' Sub-frames.

STATE whether Standard Steel Sub-cills and Metal Window Boards are also required.

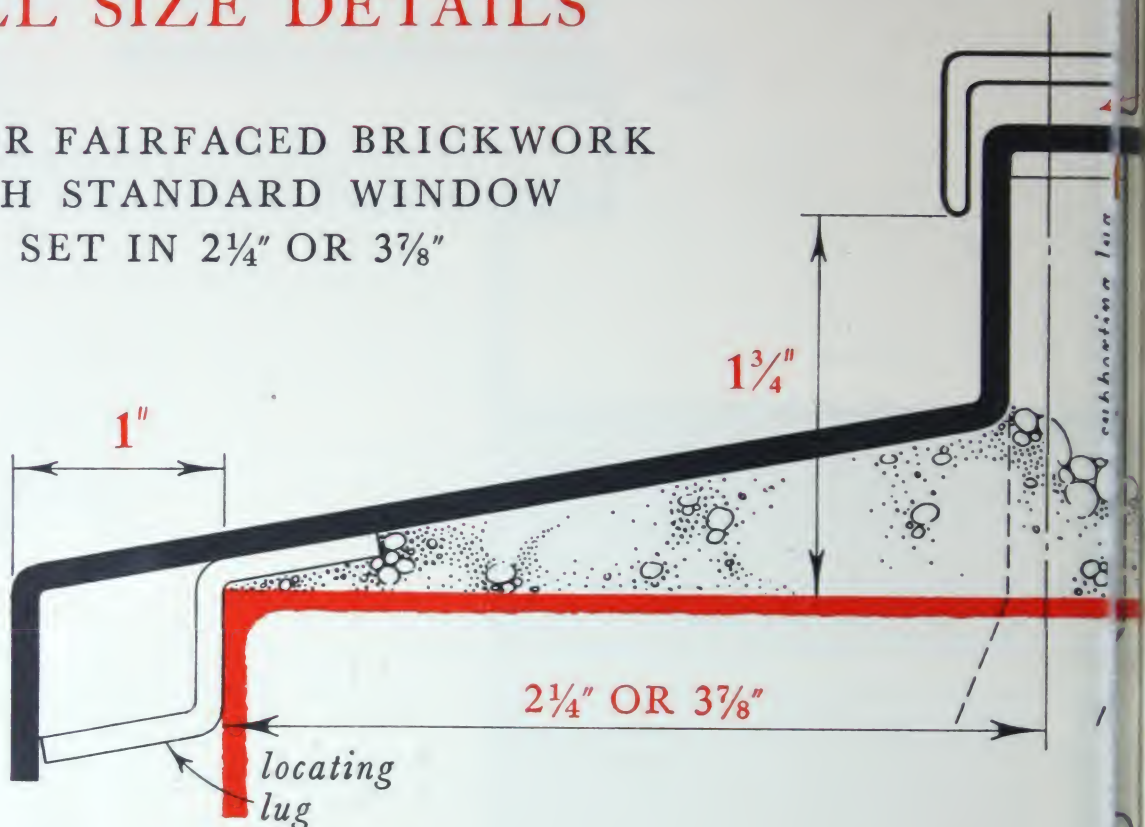




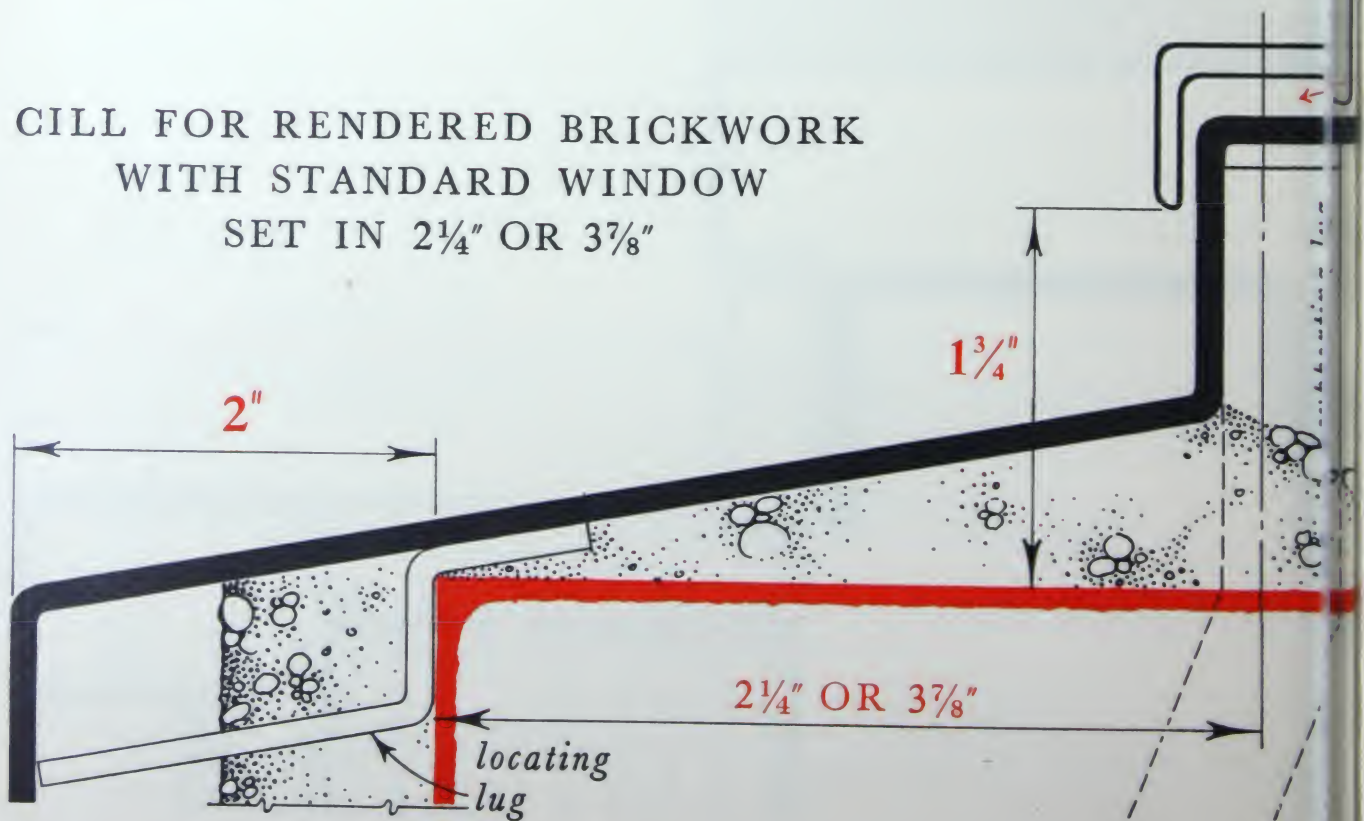


## FULL SIZE DETAILS

CILL FOR FAIRFACED BRICKWORK  
WITH STANDARD WINDOW  
SET IN  $2\frac{1}{4}"$  OR  $3\frac{7}{8}"$



CILL FOR RENDERED BRICKWORK  
WITH STANDARD WINDOW  
SET IN  $2\frac{1}{4}"$  OR  $3\frac{7}{8}"$





## *Branch Offices & Representatives*

*Head Office:* Halford Works, Smethwick, Birmingham, 40  
*Telegrams:* Conservatory Telex Birmingham.     *Telephone:* SMethwick 0891

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Scottish Temperance Buildings,  
16 Donegall Square South  
*Telephone:* Belfast 22687



## HOPE'S *hot-dip galvanized* STEEL CILLS

*Mastic*



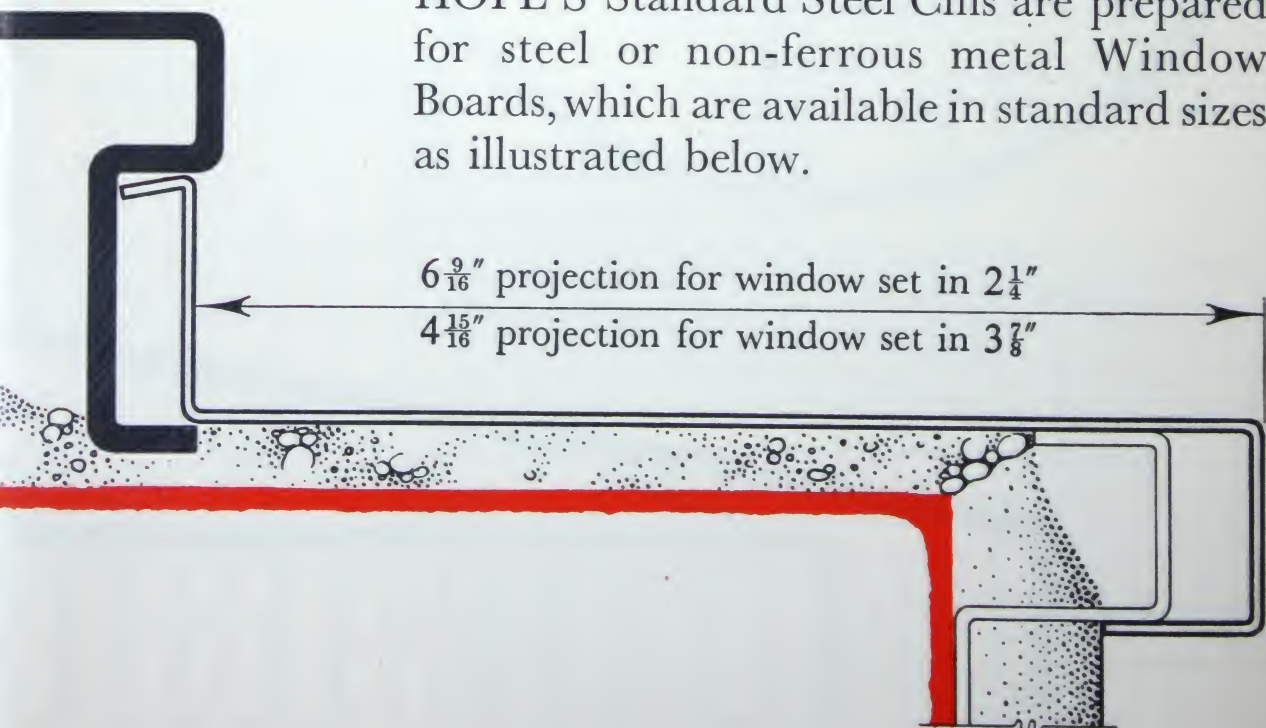
are made to the four profiles shown and in lengths corresponding to the widths of Standard Windows, i.e., 11", 1' 8", 3' 3 $\frac{1}{4}$ ", 4' 10 $\frac{1}{2}$ " and 6' 6 $\frac{1}{2}$ ".

Cills for composite windows are also supplied. HOPE'S Standard Steel Cills are made in 10g. mild steel and hot-dip galvanized, but may also be made in any non-ferrous metal. Holes are drilled and tapped in every cill to correspond with fixing holes in Standard Windows.

All cills have two locating lugs, welded to the underside 6" from each end, and when over 3' 3 $\frac{1}{4}$ " cills are also provided with a supporting lug in the centre.

HOPE'S Standard Steel Cills are prepared for steel or non-ferrous metal Window Boards, which are available in standard sizes as illustrated below.

*Mastic*





## HOPE'S *Products*

### *Casement*

Metal Windows in Bronze or Galvanized Steel for buildings where quality is of first-class importance.  
Bronze Ships' Windows.

### *Standard Window*

Galvanized Standard Windows for domestic and agricultural buildings.

### *Lok'd Bar Sash*

Galvanized Lok'd Bar Sashes in Standard or special sizes for all Industrial Buildings.

### *Pressed Metal*

Pressed Steel Door Frames. Galvanized 'Cavity' sub-frames for Standard Windows in cavity walls.  
Steel Lavatory Cubicles in Standard Units.  
Pressed metal fascia, mullions, cills, window-boards etc. Hollow Metal Doors in all types and sizes.

### *Patent Glazing*

Patent Glass Roofing, Skylights, Lantern Lights and Domes.

### *Gear*

Window Opening Gear. Tension Rod Gear, electrically or hand controlled.

### *Hardware*

Door and Window Hardware. Lead and Cast Iron Rainwater Goods.



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## HOPE'S *hot-dip galvanized* STEEL CILLS

Mastic

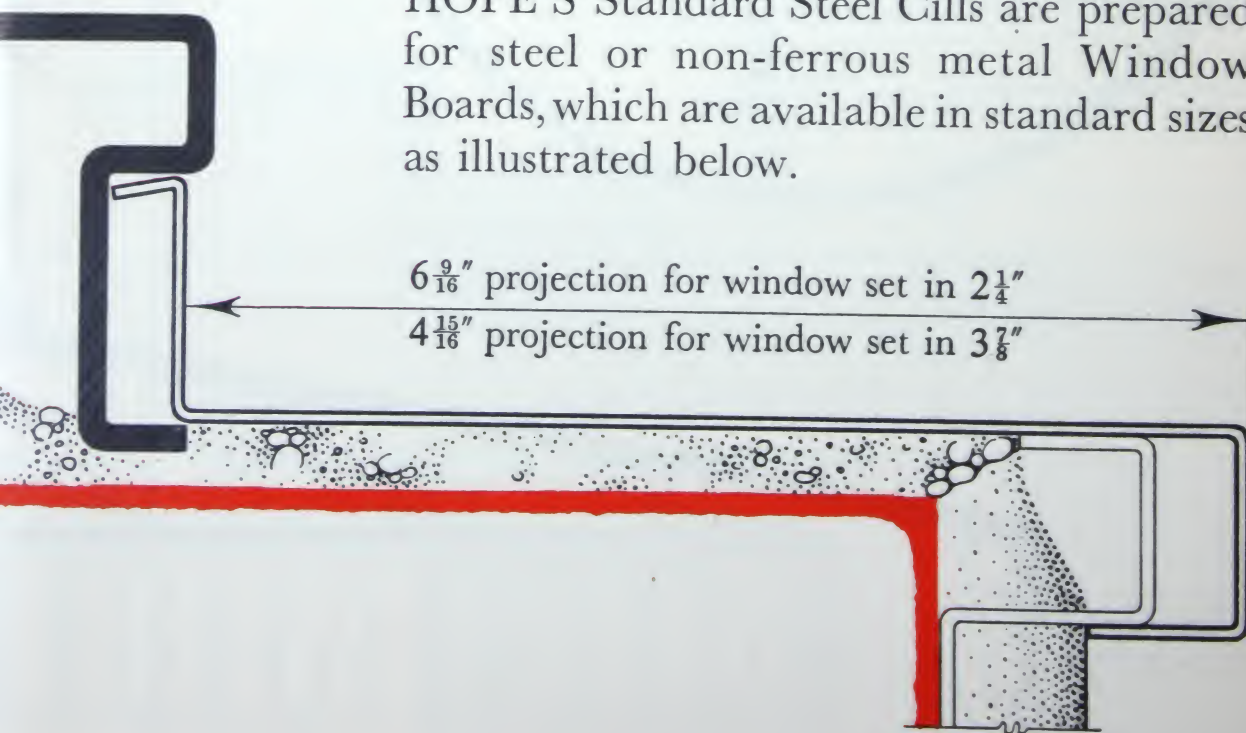


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All cills have two locating lugs, welded to the underside 6" from each end, and when over 3' 3 $\frac{1}{4}$ " cills are also provided with a supporting lug in the centre.

Mastic



HOPE'S Standard Steel Cills are prepared for steel or non-ferrous metal Window Boards, which are available in standard sizes as illustrated below.





# HENRY HOPE & SONS LTD

SMETHWICK, BIRMINGHAM, 40

Telephone: SMEthwick 0891

&

17 BERNERS STREET, LONDON, W.1

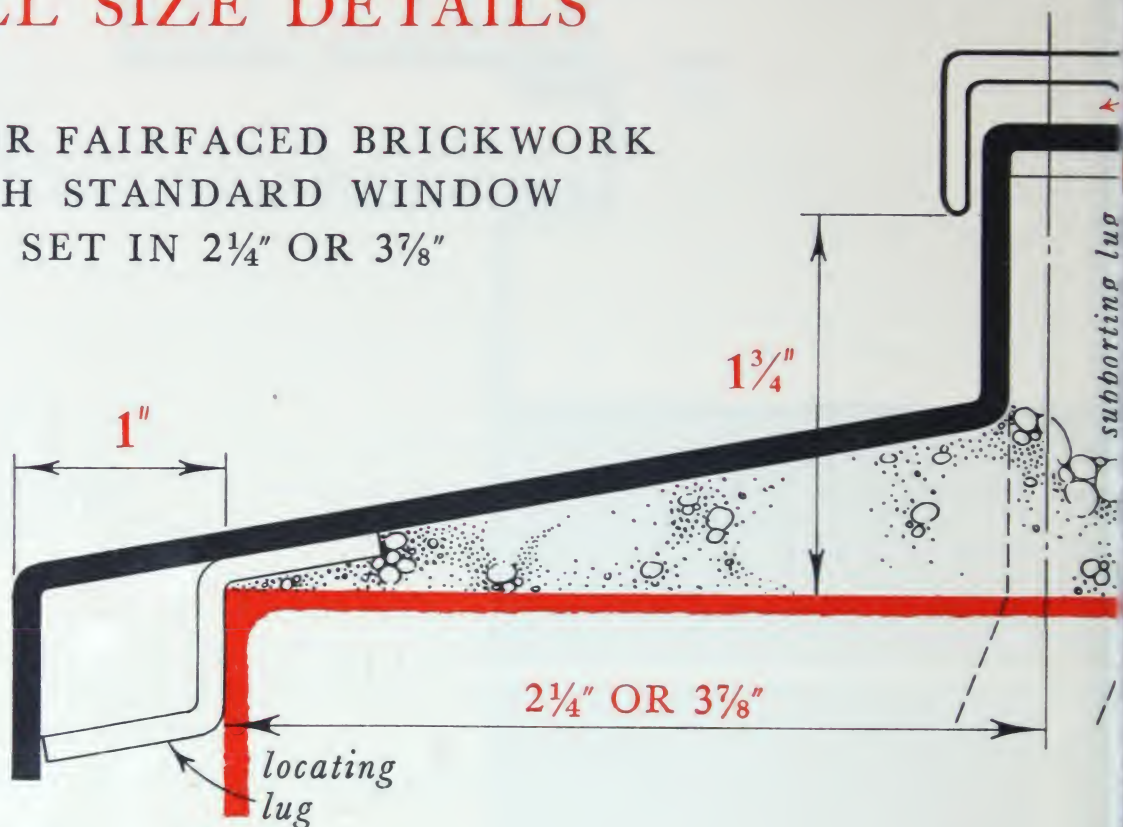
Telephone: MUSeum 8412

Henry Hapner. name for  
(8773) 11. 12. 19. 19. 19. 19.

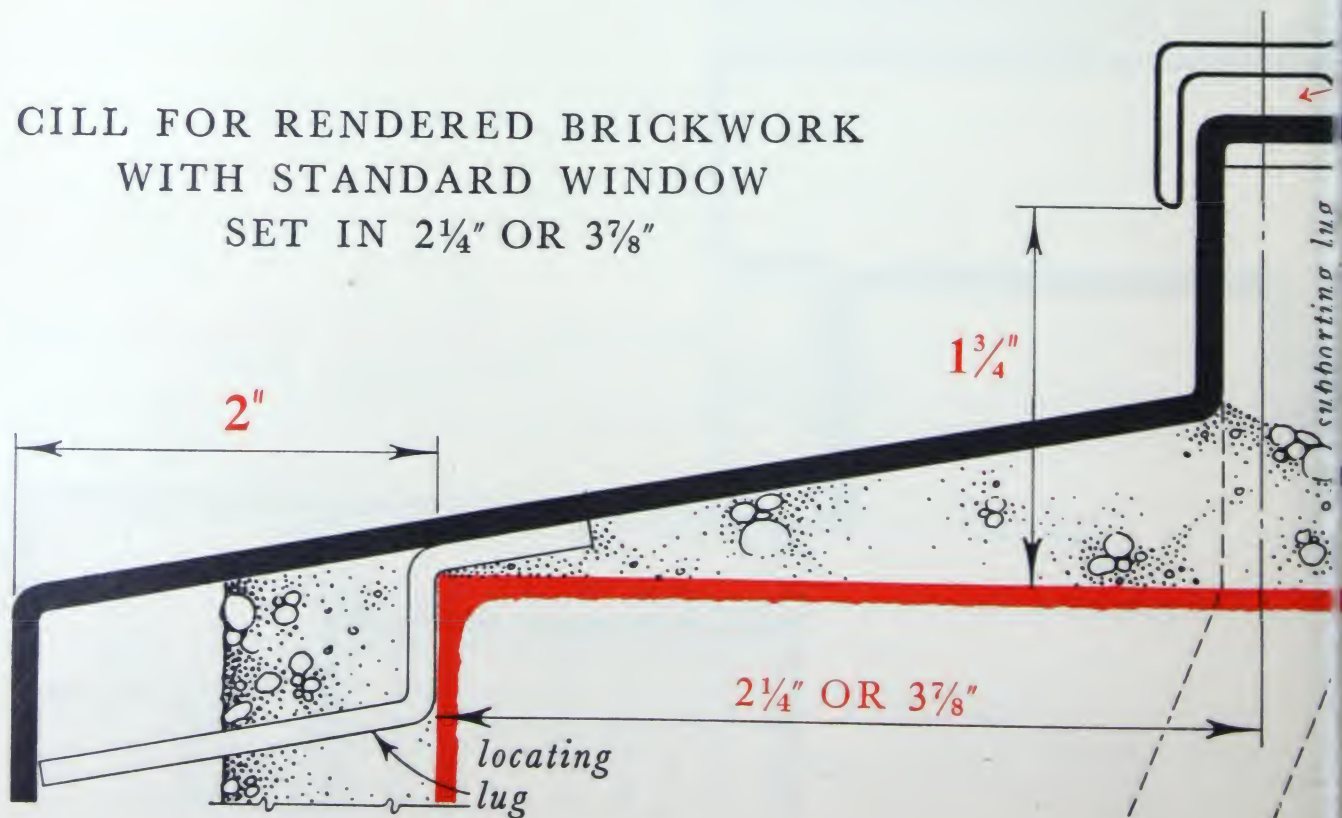


## FULL SIZE DETAILS

CILL FOR FAIRFACED BRICKWORK  
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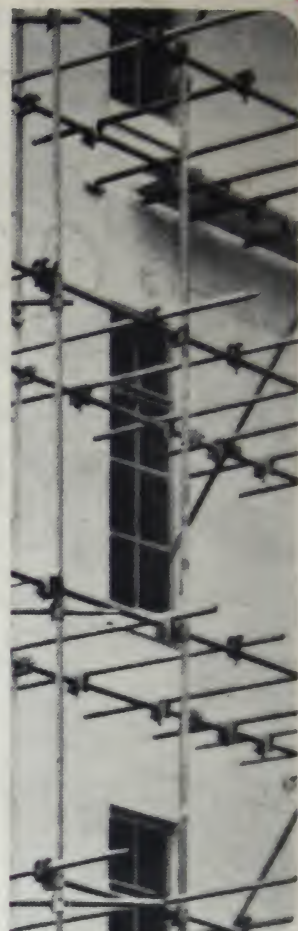
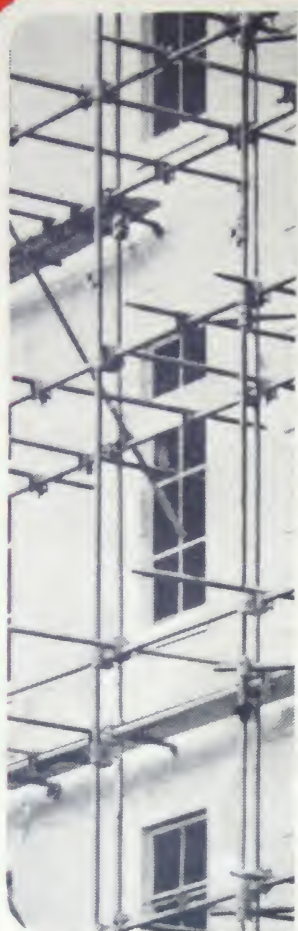
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